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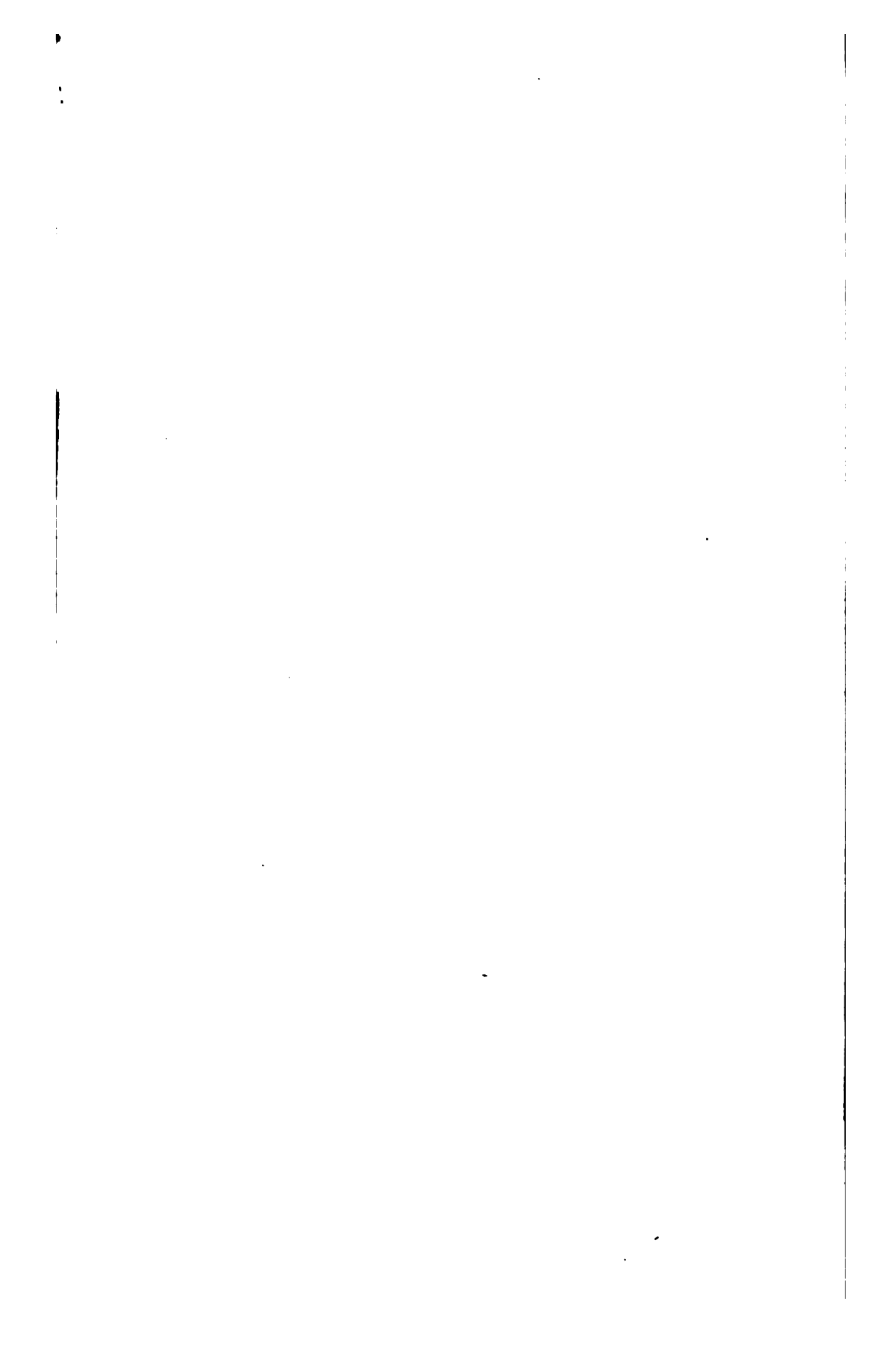
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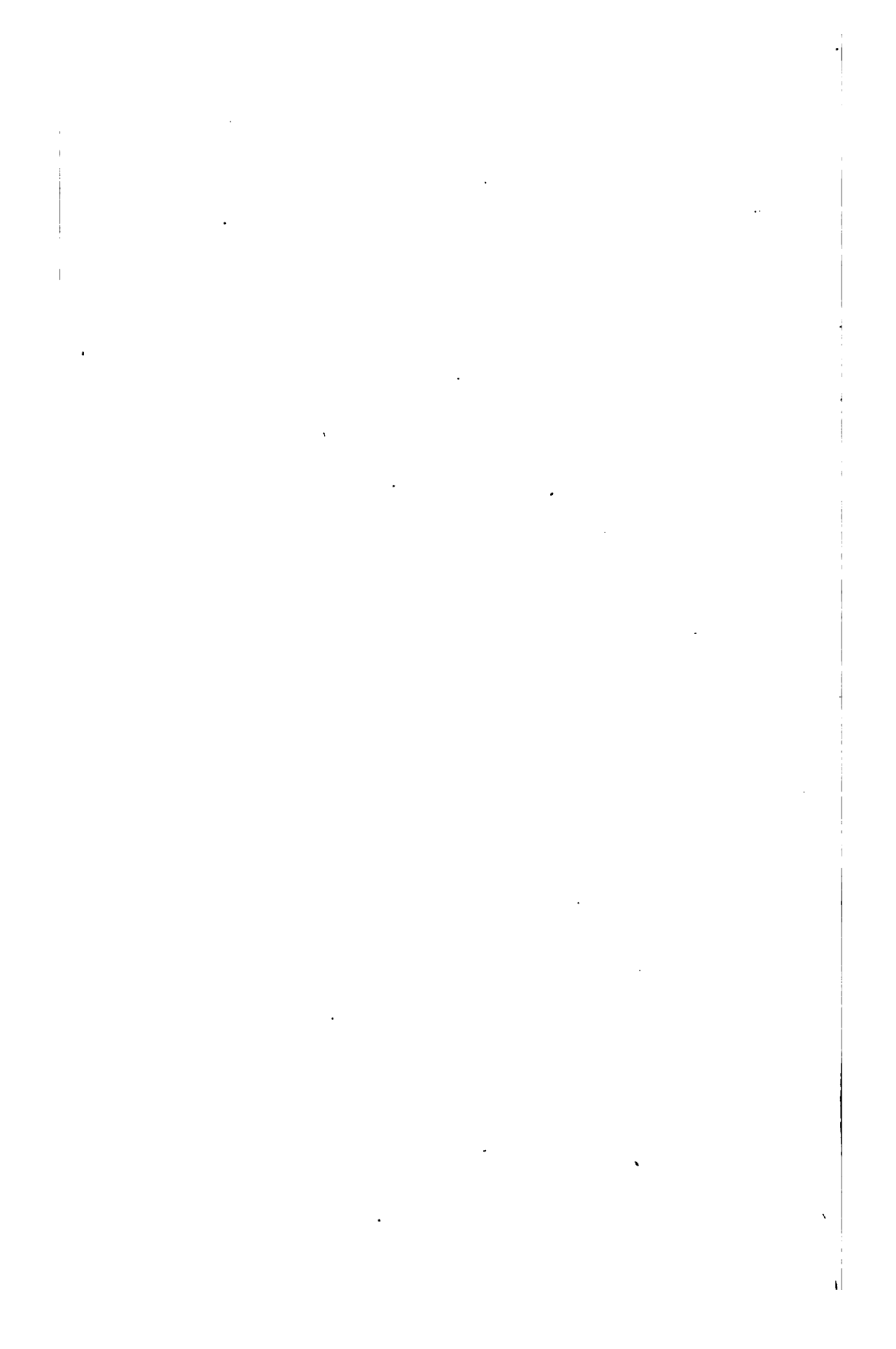
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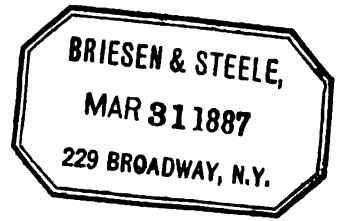




U. S. Supreme Court

DECISIONS

ON THE LAW OF



PATENTS FOR INVENTIONS

RENDERED BY

ENGLISH COURTS

*SINCE THE BEGINNING OF THE
SEVENTEENTH CENTURY.*

VOL. I.

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BY

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DARCY *v.* ALLEIN.

King's Bench, 1602.

Monopoly of Manufacture. Of Importation.

Even prior to the Statute of Monopolies,¹ 21 Jac. 1, c. 3, a royal grant of an exclusive privilege to manufacture playing-cards within the realm, or of an exclusive privilege without limitation to import and sell such cards, was void.

Demurrer to plea.

The declaration claimed, in effect, that Queen Elizabeth (intending that her subjects, being men able to exercise husbandry, should apply themselves thereto and not employ themselves in making playing-cards which had not been any ancient occupation within the realm, and observing that by reason of the making of a multitude of such cards, card-playing was becoming more frequent, especially among servants, apprentices and poor artificers, and to the end that her subjects might apply themselves to more necessary and lawful trades), by letters patent granted to the plaintiff full power, license and authority to buy beyond sea all such playing-cards as he thought good, and import them into and sell them within the realm ; that he, his servants, factors and deputies, should enjoy the whole merchan-

¹ For the Statute of Monopolies and comments on its connection with the case of Darcy *v.* Allein, see 1 Abb. Pat. Laws, 215. The nominal date of the statute, according to 7 Pick. Stat. at L. 255, was 1623. The actual date of royal approval was March 24, 1624. Dav. P.C., 8. See note, p. 5.

dise of all playing-cards; and further granted that the plaintiff, his servants, factors and deputies, and none other, should have the making of playing-cards within the realm for twenty-one years, he and they rendering to the queen 100 marks yearly; and further charged and commanded that no other persons should bring any cards, or buy, sell or make any cards within the realm, under penalty of fine and imprisonment. It then alleged that plaintiff had imported and manufactured a stock of playing-cards for the necessary use of her Majesty's subjects, and had incurred expense in so doing; but that the defendant, knowing the premises, had made and imported specified quantities of cards, and had put them upon sale, to plaintiff's damage.

No stress was laid upon the plea; but the case was argued upon two general questions raised upon the two distinct grants in the patent: 1. Whether the grant of the exclusive right of making cards within the realm was good; 2, whether the grant of the sole license to import them was available.

POPHAM, C. J., and the whole court, resolved, as to the first question, that such a grant as was claimed by plaintiff of the sole right of making cards within the realm was void, for two reasons: First, because it is a monopoly, and against the common law; second, because it is against divers acts of parliament.

First.—It must be adjudged against the common law on four grounds. As to the first ground: All trades, as well mechanical as others, which prevent idleness (the bane of the commonwealth), and exercise men and youth in labor, for the maintenance of themselves and their families, and for the increase of their substance, to serve the queen when occasion shall require, are profitable for the commonwealth; and therefore the grant to the plaintiff, to have the sole making of them, is against the common law and the benefit and liberty of the subject, as was adjudged in this court in *Davenant v. Hurdis* (Trin. T. 4 Eliz. Rot. 92); where the case was, that the Company of Merchant Tailors in London, having power by charter to make ordinances for the better rule

and government of the company, so that they are consonant to law and reason, made an ordinance, "that every brother of the same society who should put any cloth to be dressed by any clothworker, not being a brother of the same society, should put one half of his cloths to some brother of the same society, who exercised the art of a clothworker, upon pain of forfeiting ten shillings, etc. ; and to distrain for it, etc.," and it was adjudged that that ordinance, although it had the countenance of a charter, was against the common law, because it was against the liberty of the subject. For every subject, by the law, has freedom and liberty to put his cloth to be dressed by what clothworker he pleases, and cannot be restrained to certain persons, for that in fact would be a monopoly, and therefore such ordinance by color of a charter, or any grant by charter to such effect, would be void.

As to the second ground : The sole trade of any mechanical artifice, or any other monopoly, is not only a damage and prejudice to those who exercise the same trade, but also to all other subjects, for the end of all these monopolies is for the private gain of the patentees. And therefore there are three inseparable incidents to every monopoly against the commonwealth : that the price of the same commodity will be raised, for he who has the sole selling of any commodity may and will make the price as he pleases ; that after the monopoly granted the commodity is not so good and merchantable as it was before, for the patentee, having the sole trade, regards only his private benefit and not the commonwealth ; and that it tends to the impoverishment of divers artificers, and others, who before, by the labor of their hands in their art or trade, had maintained themselves and their families, who now will of necessity be restrained to live in idleness and beggary. And the common law in this point agrees with the equity of the law of God, as appears in Deut. 24 : 6, and with the civil law.

As to the third ground : The queen was deceived in her grant ; for the queen, as by the preamble appears, intended it to be for the weal public, whereas it will be employed for the private gain of the patentee, and for the prejudice of the

weal public. Moreover, the queen meant that the abuse should be taken away, which shall never be by this patent, but rather the abuse will be increased, for the private benefit of the patentee ; and therefore, as it is said in the Earl of Kent's case, this grant is void *jure regio*.

As to the fourth ground : This grant is *primæ impressionis*, for no such was ever seen to pass by letters patent under the great seal before these days ; and therefore it is a dangerous innovation, as well without any precedent or example as authority of law or reason. And as to what has been said that to play cards is a vanity, this is true if it is abused ; but the making of them is neither a vanity nor a pleasure, but labor and pains. And it is true that none can make a park, chase or warren, without the king's license ; for that is *quodam modo* to appropriate those which are *feræ naturæ et nullius in bonis* to himself, and to restrain them of their natural liberty, which he cannot do without the king's license ; but for hawking, hunting, etc., which are matters of pastime, pleasure and recreation, there needs no license, but every man may, in his own land, use them at his pleasure, without any restraint to be made, unless by parliament.

And therefore, upon the whole, it was resolved, that the queen could not suppress the making of cards within the realm, no more than the making of dice, bowls, balls, hawkshoods, bells, lewers, dog-couples, and other the like, which are works of labor and art, although they serve for pleasure, recreation and pastime, and cannot be suppressed but by parliament, nor can a man be restrained from exercising any trade but by parliament.

Second.—Such a charter of a monopoly against the freedom of trade and traffic is against divers acts of parliament, as 9 Edw. III., c. 1 and 2, which, for the advancement of freedom of trade and traffic, extends to all things vendible, notwithstanding any charter of franchise granted to the contrary, or usage or custom, or judgment given upon such charters, which charters are adjudged by the same parliament to be of no force or effect.

It was further resolved as to the second question, that the

dispensation or license to have the sole importation and merchandising of cards, without any limitation or stint, notwithstanding the act of 3 Edw. IV., is utterly against law. It is true that, inasmuch as an act of parliament which generally prohibits a thing, upon a penalty which is popular, or only given to the king, may be inconvenient to divers particular persons, in respect of person, place, time, etc., for this reason, the law has given power to the king to dispense with particular persons ; but when the wisdom of the parliament has made an act to restrain, *pro bono publico*, the importation of many foreign manufactures, to the intent that the subjects of the realm might apply themselves to the making of the said manufactures, etc., and thereby maintain themselves and their family with the labor of their hands ; now for a private gain to grant the sole importation of them to one or divers, without any limitation, notwithstanding the act, is a monopoly against the common law, and against the end and scope of the act itself ; for this is not to maintain and increase the labors of the poor card-makers within the realm, at whose petition the act was made, but merely to take away and destroy their trade and labors, and that without any reason of necessity or inconvenience, in respect of person, place or time ; and the more so, because it was granted in reversion for years, as hath been said ; but only the benefit of a private man, his executors and administrators, for his particular commodity, and in prejudice of the commonwealth. Edward III., by his letters patent, granted to one John Pechey the sole importation of sweet wine into London ; but at a parliament held 50 Edw. III., this grant was adjudged void. Also, admitting that such grant or dispensation was good, yet the plaintiff cannot maintain an action on the case against those who import any foreign cards, but the remedy which the act of 3 Edw. IV. in such case gives ought to be pursued.¹

¹ Upon this case Mr. Webster observes : " The above abridgment of the case of monopolies from Coke's reports presents the principal points of argument which were raised in that important case, and the old common law of the realm in respect of this kind of monopolies. The exclusive privileges or monopolies, to which the case especially refers,

Judgment was given and entered *quod quærens nihil caperet per billam*.

THE CLOTHWORKERS OF IPSWICH CASE.

King's Bench, 1615.

Monopoly of New Trade.

The Crown has not the general power to grant to a corporation a monopoly of a particular trade ; but if a man has made a discovery or brought a new trade within the kingdom, the Crown, in recompense of his expenditure, may grant him an exclusive right therein, for a limited time. *So held* before the Statute of Monopolies.

Demurrer to plea.

The action was debt for a penalty, brought by the masters and wardens of the clothworkers or tailors of Ipswich. The declaration alleged that the king had incorporated the plaintiffs, and had granted them a charter by which no person might exercise the art or trade of a clothworker or tailor within the town, unless he had first served an apprenticeship ; and that the defendant had exercised the trade in violation of this charter.

The defendant pleaded the service of his apprenticeship particularly described ; to which plaintiff demurred, with

are of a very different kind from those which are the subject of the following pages ; and in tracing down the law of letters patent for inventions from the old sources, it is of great importance to point out distinctly the consideration, suggestion or motive of the grant, as expressed on the face of the letters patent, since this will in general be sufficient to decide their validity or invalidity at common law. In the preceding case, the consideration or motive is the restraining people in one known occupation, in order that they might employ themselves in another ; and this was to be effected by giving the exclusive privilege of manufacture and sale to certain persons. Such a grant is declared to be a monopoly, and against the common law. The principles of the above decision have been recognized in many subsequent cases of grants or restraints connected with some known manufacture or trade." 1 Web. P. C. 4 n.

the intention, apparently, of raising the question as to the sufficiency of such apprenticeship, and the proof thereof; but the only question argued involving the law of patents was, whether the constitution or ordinance was lawful.

By THE COURT, it was holden that the said ordinance was unlawful; and it was agreed by the court, that the king might make corporations, and grant to them that they may make ordinances for the ordering and government of any trade; but thereby they cannot make a monopoly, for that is to take away free trade, which is the birthright of every subject. And therefore the case was in 2 Hen. V., c. 5, in debt upon a bond upon condition that one should not use his trade of a dyer in the town where the plaintiff did inhabit for one year; and there said that the obligation was void, because the condition was against the law.

It was resolved that, although such clause was contained in the king's letters patents, yet it was void. But where it is either by prescription or by custom confirmed by parliament, there such an ordinance may be good *quia consuetudo legalis plus valet quam concessio regalis*. The king granted unto the Abbey of Whitney the custody of a port, which is, as it were, a key of the kingdom; and therefore the grant was void, and so adjudged. And such grants are expressly against the statute of 9 Edw. III., c. 1. And the charter granted by King Henry VIII. to the physicians of London has the same clause in it; but if it had not been confirmed by act of parliament made 33 Hen. VIII., it had been void.

The king granted unto B. that none besides himself should make ordnances for battery in the time of war; such grant was adjudged void.

But if a man hath brought in a new invention and a new trade within the kingdom, in peril of his life, and consumption of his estate and stock, etc., or if a man hath made a new discovery of anything, in such cases the king, of his grace and favor, in recompense of his costs and travail, may grant by charter unto him, that he only shall use such a trade or traffic for a certain time, because at first the people of the kingdom are ignorant, and have not the knowledge

or skill to use it ; but when that patent is expired, the king cannot make a new grant thereof, for when the trade has become common, and others have been bound apprentices in the same trade, there is no reason why such should be forbidden to use it. And COKE,¹ C. J., put this case : The king granted to B. solely, that he should make and carry kersies out of the realm ; and the grant was adjudged void.

Judgment for defendant.

EDGEBERRY v. STEPHENS.

King's Bench, 1691.

Thing New in England. Known Abroad.

A grant of a monopoly may be to the first inventor, by Stat. 21 Jac. I., c. 3 ; and if the invention be new in England, a patent may be granted though the thing was practised beyond the sea before ; for the statute speaks of new manufactures within this realm ; so that, if they be new here, it is within the statute ; for the act intended to encourage new devices, useful to the kingdom, and whether learned by travel or by study it is the same thing.

Agreed by HOLT and POLLEXFEN, JJ., in this case.

REX v. MUSSARY.

King's Bench, 1738.

General Rules Relative to Letters Patent.

Respecting patents,² the following general rules were laid down by LEE, C. J. (Mich. T. 12 Geo. II.; 1738) :

¹ This name is spelled *Cook*, C. J., in Godbolt, but Rolle gives it as COKE ; which is undoubtedly correct.

² The case apparently was not one of a patent for an invention ; but

1. Every false recital in a thing not material will not vitiate the grant if the king's intention is manifest and apparent.

2. If the king is not deceived in his grant by the false suggestion of the party, but from his own mistake upon the surmise and information of the party, it shall not vitiate or avoid the grant.

3. Although the king is mistaken in point of law or matter of fact, if that is not part of the consideration of the grant it will not avoid it.

4. Where the king grants *ex certa scientia et mero motu*, those words occasion the grant to be taken in the most liberal and beneficial sense, according to the king's intent and meaning expressed in his grant.

5. Although in some cases the general words of a grant may be qualified by the recital, yet if the king's intent is plainly expressed in the body of the grant the intent shall prevail and take place.

DOLLOND'S CASE.

Common Pleas, 1766.

Prior Use.

Use of a process without any disclosure of it to other persons is not such a prior use as deprives a subsequent inventor of his right to a patent.

Action for damages.

The patent was granted to John Dollond, April 19, 1758, for "a new method of making the object-glasses of re-

the rules have generally been considered applicable to that class of letters patent.

fracting telescopes by compounding mediums of different refractive qualities, whereby the errors arising from the different refrangibility of light, as well as those which are produced by the spherical surfaces of the glasses, are perfectly corrected."

The principal glass of a refracting telescope is that which is farthest from the eye, and is commonly called the object-glass, because it is at that end of the telescope which is directed toward the object. This glass refracts the rays which proceed from the object in such a manner as to form an image of the aforesaid object in the focus, which image is magnified by the eye-glasses; but as every ray of light consists of parts that differ in their degrees of refrangibility, an image formed by refraction is thereby rendered very defective, as all opticians very well know. Now, in these new telescopes the images of objects are formed by the difference between two contrary refractions, the object-glass being a compound of two or more glasses put close together, whereof one is concave and the other convex. The excess of refraction by which the image is formed is in the convex glass, which is made of a medium or substance in which the difference of refrangibility is not so great as in the substance which the concave is made of; therefore their refractions being proportional to their difference of refrangibility, there remains a difference of refraction by which the image is formed, without any difference of refrangibility to disturb the vision. The radii of the surfaces of each of these glasses are likewise so proportioned as to make the aberrations or errors which proceed from the spherical surfaces of these glasses respectively equal; and being contrary, they destroy each other.

One defense was that of anticipation; to sustain which proof was made that many years before the date of Dollond's patent, a Dr. Hall had made and continued to use object-glasses of precisely similar construction to those of the patent; but it appeared that Dr. Hall had only used them in his own observatory, and had made no publication of their construction or use; on the contrary, he received credit for the correctness of his observations, the public not

knowing by what means he made them. This was held not to be a public use.

The defendant objected that a patent for a mere method could not be sustained. Another objection taken was that the specification described only the principle, not the mechanical construction. But the patent was sustained.

No formal report of the case is found ; but the general grounds of decision may be gathered from allusions to the case made in the opinions (particularly that of BULLER, J.) rendered in the subsequent case of *Boulton v. Bull* (*post*, p. 59).

BULLER, J. The objection to Dollond's patent was, that he was not the inventor of the new method of making object-glasses, but that Dr. Hall had made the same discovery before him. But it was holden, that as Dr. Hall had confined it to his closet, and the public were not acquainted with it, Dollond was to be considered as the inventor. . . . Dollond's patent was for object-glasses, and the specification properly stated the method of making those glasses. The point contested in that case was whether Dollond or Hall was the first and true inventor within the meaning of the statute, Hall having first made the discovery in his own closet, but never made it perfect ; and on that ground Dollond's patent was confirmed.

HEATH, J. I consider Dollond's patent, which was for a refracting telescope, as substantially one for an improved machine. A patent for an improvement of a refracting telescope and a patent for an improved refracting telescope are in substance the same. The same specification would serve for both patents ; the new organization of parts is the same in both.

EYRE, C. J. When the effect produced is some new substance or composition of things, it should seem that the privilege of the sole working or making ought to be for such new substance or composition without regard to the mechanism or process by which it has been produced, which, though perhaps also new, will be only useful as producing the new substance. Upon this ground Dollond's patent

was perhaps exceptionable, for that was for a new method of producing a new object-glass, instead of for the object-glass produced.

ROEBUCK *v.* STIRLING.

House of Lords, 1774.

Prior Public Use. England and Scotland.

Public use of an invention in England, prior to the issue of a patent for it in Scotland,—*Held* to have rendered the Scotch patent void.

Appeal from the Court of Session.

Letters patent under the great seal of Scotland were issued, June 11, 1771, to John Roebuck and S. E. Garbett, for “the means of obtaining an acid spirit from sulphur and saltpetre in vessels of lead, and likewise of purifying the same also in vessels of lead.”

The specification as enrolled by Roebuck described the method of making acid spirit by burning sulphur and saltpetre, and collecting the condensed fumes, and stated the “material discovery to be the use of leaden vessels instead of vessels of glass, in all or any part of the process.”

The patentees, in their case, stated the uses of the article and the usual methods of preparing it: 1. By burning sulphur and collecting the fumes by a bell-glass held over, by which the fumes were condensed; 2. By distillation, in strong glass retorts, over a strong fire; 3. By burning sulphur and saltpetre in close glass vessels; 4. By burning these materials, and collecting, rectifying and purifying, in vessels of lead, the spirit, which was the subject of the above patent. They alleged that by this invention the price of the articles was reduced 30 per cent. immediately; that they carried on the manufacture in secret for a time, but, on discovering that others were learning the art by decoying their servants, they applied for and obtained the above patent.

In January, 1772, after the respondents, William Stirling

& Son, had made considerable progress in erecting buildings for engaging in the same manufacture, the appellants applied, by bill of suspension, to the Court of Session, praying an injunction to stop the respondents from proceeding with such building. After sundry proceedings, the bill was passed for stopping the works ; and, the case being remitted to the Lord Justice Clerk to be discussed, the respondents stated the following objections :

1. That the substitution of lead in place of glass vessels was no new discovery, being only a small variation in the method of conducting the manufacture. 2. That it could be no new discovery at the time of granting the patent, because the appellants had carried on the manufacture in that method for twenty years preceding the date of the patent. 3. That at the time the patent was granted, this method of manufacturing oil or spirit of vitriol in vessels of lead was known and practised by various other persons both in England and Scotland. 4. That the appellants had not given such a description of their invention as was required by the patent, and that it was signed by Roebuck only, and not by both the appellants.

The appellants answered : 1. That a new mode of manufacture, beneficial to the public, entitled the inventor to an exclusive privilege for the mode, leaving the other known modes free to every person. 2. That they were the original and first inventors of the use of lead vessels in the place of glass, and had made the discovery by degrees, after many tedious experiments, and were in possession of the same for many years before the date of the letters patent. 3. That before the date of the patent the invention was not publicly practised, either in England or Scotland, and that to vitiate the patent a public exercise must be proved. That it is not sufficient to say that private experiments have been made, or that persons, by corrupting appellants' servants, were attempting to practise it. 4. That the description was as explicit as the nature of the subject admitted, and that Roebuck had full authority to sign it for himself and Garbett.

The Lord Ordinary, after various proceedings, reported

the cause to the court, and thereafter, before answer, allowed the respondents to prove *pro ut de jure* that the making the oil of vitriol from a mixture of sulphur and saltpetre in vessels of lead was, at the time and before the date of the letters patent in favor of the appellants, known to and actually practised by others than the appellants themselves, and granted a commission to examine witnesses in England and Scotland.

The proofs being concluded, the parties were ordered to give in memorials on the import thereof. The appellants, in their memorial, observed that by the Treaty of Union, England and Scotland are to have the same allowances, encouragements and drawbacks, and to be under the same prohibitions, regulations and restrictions of trade. That by this law the statute (21 Jac. I., c. 3) of monopolies is extended to Scotland, and consequently it has been customary since the union to grant patents in Scotland in the same form and to the same effect as in England. That these patents, to be effectual in both parts of the United Kingdom, must pass the seals of each ; for a patent under the great seal of England does not extend to Scotland, nor under the great seal of Scotland to England, these countries being in the eye of the law foreign countries in this particular ; whence it appears that the Scotch law relative to patents is the same with the law of England, and must be interpreted by the practice and judgments of the courts there. That the rule adopted in England is, that the person who first used the invention within the realm, whether he is the original inventor or brings the invention from foreign parts, is entitled to a patent, as is decided by the adjudged cases. That the law of Scotland considers every place not subject to the jurisdiction of its own courts a foreign country, and though the law relative to patents be the same in both parts of the United Kingdom, yet, in applying it, England is considered a foreign country to Scotland ; accordingly the clause in the letters patent is, that they shall be void if it shall be found that the subject-matter of them “*quoad ejus publicum in illa parte dict. regni nostræ Magnæ Brit. Scotia vocat. usum et exercitum non esse novam invention-*

em." They therefore claimed that they were consequently entitled to their patent, unless the respondents should prove that before the date of the patent the manufacture was publicly practised, by others, in Scotland; and contended that a private or clandestine manufacture in small quantities would not answer the purpose, because an invention which is kept secret from the public, or is locked up in the breast of the inventor, is, so far as respects the public, no invention at all; the man who first makes the art or invention public is alone entitled to receive from the government the advantages accruing from it. The appellants further insisted that they were the original and first inventors of the manufacture, in the most strict and literal sense of the term, but urged that, even though the invention were found to have been practised, before their patent, in any other country considered a foreign one in the law of Scotland, yet that if such practice had not extended to Scotland, it could make no alteration in the question.

The questions were, therefore, 1, whether the respondents had proved their knowledge and user of the invention before the patent; 2, whether the modes were known and practised by any other person in Scotland before the patent; or, 3, by any person in England.

The respondents, in their memorial, maintained that, the whole United Kingdom being subject to the same rules, regulations and restrictions in matters of trade, if the trade of making oil of vitriol in vessels of lead was free to all men in England, it must in like manner be free to all men in Scotland, notwithstanding the patent granted to the appellants. They also maintained, that the patent was void on the following grounds: 1. That the invention was not a subject-matter. 2. That the appellants had known and practised the invention fourteen years before they applied for the patent. 3. That the invention had been practised by others, both in England and Scotland, and was not within the proviso of 21 Jac. I., c. 3, it being no new invention or discovery of any art or manufacture, but only a trifling improvement, without the least variation in the manufacture itself, the spirit or oil of vitriol being the same as before.

That if the substance was *in esse* before, a new addition, though making the former more profitable, yet is not a new manufacture in law. That this was no new discovery at the date of the patent, the grant whereof is meant as a recompense to the patentee for his invention by giving him an exclusive right for fourteen years; consequently, when a person has enjoyed his invention for a longer term than that for which patents are granted, he has no title to demand one. That the patent was void, the invention having been practised both in England and Scotland before the date of the patent. And in answer to the claim of the appellants, that however invalid the patent might be in England it must be good in Scotland, the respondents relied on article 6 of the Treaty of Union; and urged that, the whole United Kingdom being subject to the same prohibitions, restrictions and regulations, as to trade, and it being indisputable that the making the oil of vitriol is free to all men in England, this trade could not be the subject of a monopoly in Scotland.

The cause was then reported by the Lord Ordinary to the whole court, and the following interlocutor pronounced:— In respect it appears from the proofs adduced that the art of making oil of vitriol, from a mixture of sulphur and salt-petre, in vessels of lead, was, at the time and before the date of the letters patent of the appellants, known to and actually practised by different persons in England—therefore the Lords find the letters orderly proceeded and decern.

The following is a report of the judgments of the Lords in the Court of Session.

LORD HAILES. A very momentous question occurs here. Messrs. Roebuck & Company contend “that although they were not the inventors of making oil of vitriol in lead vessels, still their patent must be good to exclude others, because they were the first that practised that art in Scotland.” Your lordships will not establish this proposition without maturely weighing its consequences, which seem exceedingly strange. I will explain what I mean by a few familiar examples. The first stocking-loom in Scotland was established

at Glasgow between thirty and forty years ago. According to Messrs. Roebuck & Company, the man who first established that stocking-loom might have sought and obtained a patent, prohibiting all others in Scotland from establishing a stocking-loom in Scotland for fourteen years; the same would be the case as to the still later establishment of looms for silk, gauze, and ribbons, so necessary in the present ruined state of our linen manufactures. At this day the working of velvet, or of any other manufactures used in England, but not in Scotland, may be circumscribed by patent for fourteen years; that is, all new manufactures may be limited in Scotland to one man for the space of fourteen years. The only person in Scotland who has used Dr. Franklin's conductor for lightning is Dr. Lind. Were that gentleman less benevolent than he is, he might monopolize Dr. Franklin's invention in Scotland for fourteen years. According to the suspender's argument, he, as the first user, though not the inventor, may have a patent. Although lightning were as frequent and as fatal in Scotland as in Virginia and Pennsylvania, no man could use the conductor without Dr. Lind's permission, no, not even Dr. Franklin himself. Take the latest invention of all, Dr. Irvine's method of making salt water fresh. The process is simple; I may set it a going in Scotland, procure a patent, and prohibit all the inhabitants in Scotland from making salt water fresh. Again, there is in Edinburgh one Dallaway, who understands the method of enamelling on white iron as practised at Birmingham. This art is not known in Scotland; it is a manufacture which would maintain thousands of hands. There can be no doubt of the *publicus usus et exercitium* of Dallaway, for I have seen his work; he may therefore obtain a valid patent to-morrow, and prevent the further introduction of the manufacture into Scotland for fourteen years. Many more examples might be given, but these may suffice to call your lordships' attention to this question,—whether that proposition can be true in law whereof the consequences are obviously ruinous to the whole system of improvements in Scotland.

Lord GARDENSTON. Here is such an improvement as

may be held an invention. There is nothing in the objection that Roebuck & Company had privately carried on the trade for a number of years. The great difficulty is here,—that the work in lead vessels had been carried on in England before the date of the patent. I should even doubt whether a patent might be granted to the person who first introduced any foreign invention into Britain. In matters of prerogative there is no distinction between England and Scotland. This distinction was taken away by the happy union.

Lord KAIMES. This is a matter of considerable moment, because it concerns the good of the public and manufactures. The suspenders take the benefit both of the act of James I. and of the general prerogative of all princes touching patents to new inventions. The radical point is whether Messrs. Roebuck & Company have invented anything material. They certainly have. The use of lead vessels instead of glass is a matter of great moment. It has been said that if the use of lead vessels was known in England before the date of the patent, Messrs. Roebuck & Company cannot support their patent; and to illustrate this, the use of the stocking-loom, etc., has been mentioned. I am not sure that the king could not have granted a patent to the person who introduced the stocking-loom into Scotland. The cases, however, are different, for the stocking-loom was a public manufactory in England, to which every one had access; whereas, they who made oil of vitriol in lead vessels at Bridgenorth or Bewdley wrought privately, and work privately still.

Lord MONBODDO. The invention of Messrs. Roebuck & Company has proved useful; it has been found by this court that it is sufficiently published. I do not see the case of the Glasgow Merchants in so favorable a light,—they had no certain knowledge of Roebuck's method; they sent one of their servants to corrupt the servants of Roebuck, and to discover the secret. Yet we must determine on grounds of law, not of favor. The first objection is that there is no new discovery. *Ans.* Call it a discovery, or call it an improvement, it is so material as to entitle Messrs. Roebuck & Company to a reward. The second objection is that the

patentees had used this method for fourteen years before the date of the patent. *Ans.* 1. In point of fact, it is long since they began to try it ; but they did not till of late bring their trials to perfection. 2. There was no occasion for applying to obtain a patent till there was a danger of discovery. The third objection is that the discovery was not made by Roebuck & Company. I do not see any evidence of the art having been practised in Scotland. The charger's pretensions for discovery are ridiculous. It is acknowledged that there is no proof as to Steel. With respect to England, that the art was practised in England before the date of the patent, I am satisfied. It is probable that the discovery came from Roebuck himself by the treachery of one Fauconbridge, a discarded servant. (This is probable conjecture. The company gave Fauconbridge 10s. a week, and on his proving idle and drunkensome, dismissed him. It is likely that he told all he knew to the English artists, and that, though he might not be able to explain the whole process, yet could tell enough to set chemists on the right scent. It was a poor saving to the company to suffer so dangerous a man as Fauconbridge to go at large because he was not worth his wages.) However, I lay not stress on the circumstance of the discovery having come from Roebuck & Company. The question, then, comes to this,—Will not Roebuck's patent be good, as he first brought the art into Scotland ? Even in that view, as the introducer of this art, he is a great benefactor to the nation. The art was not publicly practised in England ; its being secretly practised there will not affect Roebuck's patent. But I will suppose that the art was publicly practised in England ; still I think it the same thing as if Roebuck had introduced it into Scotland from beyond seas. In the sense of law, England with respect to us is beyond seas. (There is a decision of the court finding the contrary in express terms.) The Article of Union touches not this case. This is not a matter of trade, though it may be useful in trade. There is no communication of the law of patents between the two nations.

Lord COALSTON. I am clear that there is no relevancy on

the first and second objections. My sole difficulty lies in the third objection, that this art had been practised in England and elsewhere before the date of the patent. There is no proof either as to the Stirlings or as to Steel. It is not sufficient that others may have known it, if others did not use it. The patent will be good ; so says the act of King James I., which the parties admit to be the law of Britain ; but the evidence of its having been practised in England is sufficient to void the patent. I admit that its being practised in foreign parts would not be a good objection. It is proved to have been practised at Bridgenorth and Bewdley ; this I think is a good objection in the words of the Articles of Union. Upon this clause of the Articles of Union, the statute of James I. is admitted to be the law of Britain. At the time of the union, there was scarcely one manufacture properly practised in Scotland. Most of the manufactures now known were then known in England. Was it agreeable to the Statute of Monopolies or to the Articles of Union that any subject of Scotland could apply for a patent respecting any manufacture known in England but not in Scotland ? This cause falls to be determined upon the Articles of Union. If there was any doubt as to this, the arguments *ab incommodo* are unanswerable. As to what is said, that this art is kept secret in England, the truth is that manufactures, especially in the chemical way, are kept secret as much as possible, even after a patent.

The Lord Justice CLERK. I would repel the first and second objections ; but the third is irresistible. As to what is said, that this business is kept a secret, it is notoriously known that many of the most valuable manufactures in England, whether with patent or without, are conducted with all imaginable secrecy. The words, *publicum exercitium*, though in the patent, are not in the statute. I should be sorry that we adopted this rule of decision, holding that a patent would be good against establishing manufactures in Scotland which are practised in England ; this destroys the evidence from the king's patent that Roebuck was the original inventor. The law of monopolies is general, with the exception of the first inventor.

LORD GARDENSTON. In the case of *Clark v. Laycock*, decided in the King's Bench, Clark had a patent for both kingdoms; his patent was set aside upon the evidence of Scotch witnesses that the art had been practised in Scotland before the date of Clark's patent.

LORD MONBODDO. I regard not arguments *ab incommodo*; we must judge according to law, not conveniency. If there are such evil consequences from patents, why, let the king grant none such, or let the legislature regulate them.

May 27, 1774. On appeal to the House of Lords from the preceding, it was ordered and adjudged: That the appeal be dismissed, and that the interlocutors therein complained of be affirmed, for other reasons as well as those specified therein.

MORRIS v. BRAMSOM.

King's Bench, N. P., 1776.

Patent Grantable for an Addition.

Trial of an action for infringement.

The patent for infringing of which the action was brought was granted to John Morris and others, dated March 28, 1764, "for an engine or machine on which is fixed a set of working needles, which engine or machine is fixed to a stocking-frame, for the making eyelet-holes or network in silk, thread, cotton, or worsted, as mitts, gloves, hoods, aprons, handkerchiefs, and other goods usually manufactured upon stocking-frames by a method entirely new."

Previously, an action for infringement of the same patent, entitled *Morris v. Else*, was tried, and a verdict rendered in favor of the patent. It was not reported.

In the present suit one ground of defence was that the patent could not be sustained because it was only for an addition to an old machine.

LORD MANSFIELD, C. J., in summing up the case to the jury, said in effect: If the general question of law—viz., that there can be no patent for an addition—be with the defendant, that is open upon record, he may move in arrest of judgment; but that objection would go to repeal almost every patent that was ever granted.

Verdict for plaintiff, with £500 damages; which was acquiesced in.

LIARDET *v.* JOHNSON.

King's Bench, 1778.

Sufficiency of Specification. Omission.

A test of the sufficiency of a specification is: Does this description give the public the benefit of the invention after the patent shall have expired?

Trial of an action for infringement.

The patent was granted to John Liardet, the plaintiff, dated August 3, 1773, for "composition or cement for all the branches concerning buildings, to which the same is applicable, with a grease for frictions, preserving steel, iron, and various other uses." The description was: "Composition of the new grease for preserving steel, iron, etc., from the rust, and for frictions; take oil, any kind of absorbent matters mixed together, colored as you please; the steel and iron must be covered with the said grease in the same manner as if painted." The defence objected that the specification omitted an element very necessary in tempering steel, viz., rubbing it with tallow. Upon account of this omission the patent was held void.

LORD MANSFIELD, C. J. The general questions on patents are, 1, whether the invention were known and in use before the patent; 2, whether the specification is sufficient to enable others to make it up. The meaning of the specifi-

cation is that others may be taught to do the thing for which the patent is granted, and if the specification is false the patent is void, for the meaning of the specification is that after the term the public shall have the benefit of the discovery.

HICKS *v.* RAINCOCK.

Chancery, July 23, 1783.

Injunction before Establishing Right at Law.

Demurrer.

The bill prayed an injunction to stay an infringement by the defendant of the plaintiff's patent for machinery for making loops in stockings. The defendant demurred, the plaintiff having established his right in a court of law.

The Lord Chancellor overruled the demurrer.

Ex parte BECK.

Before the Chancellor, Dec. 22, 1784.

Impropriety of Giving Fictitious Date.

A caveat having been entered against the sealing of a patent which bore date August 12, 1784, the Lord Chancellor, upon hearing the petition, took some time to consider it, and did not make his order for discharging the caveat until the 27th of August. The patentee, supposing the patent bore date the latter day, did not enroll his specification till the 18th of December, when the four months allowed for enrolment had expired. The patentee now petitioned the Lord Chancellor to alter the patent, by making it bear date the 27th of August, instead of the 12th.

The Lord Chancellor said that although he was perfectly satisfied that the patentee was well entitled to his patent, and that his case was a very hard one, yet he could not make such a use of his power, as keeper of the great seal, as to alter a patent, in any degree, upon an application of this sort; that, perhaps, upon the petitioner's applying for a new patent, the officers might, under these circumstances, be induced to remit their fees; but that he could give no relief upon the present petition.

Petition denied.

ARKWRIGHT v. NIGHTINGALE.

Common Pleas, N. P., Feb. 17, 1785.

Sufficiency of Specification. Damages of Infringement of Patent at first held Invalid.

The clearness of the specification must be according to the subject-matter of it; it is addressed to persons in the profession having skill in the subject, not to men of ignorance, and if it is understood by those whose business leads them to be conversant in such subjects, it is intelligible.

If a patentee, who has failed to establish his right under the patent upon a former occasion, sues for damages for an alleged infringement, the defendant is allowed to show to what extent persons have acted upon the faith of the former verdict.

Trial of an action for infringement.

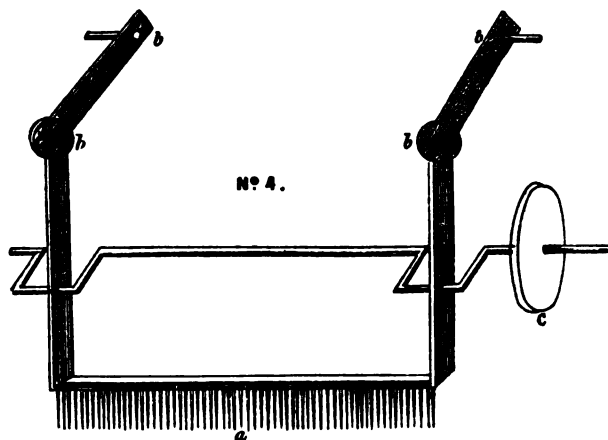
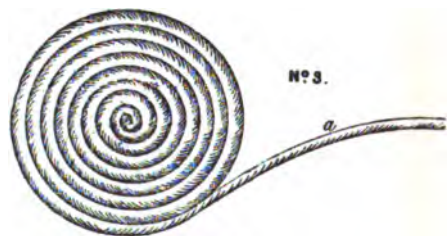
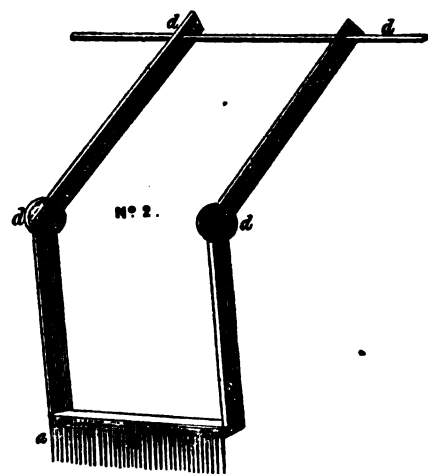
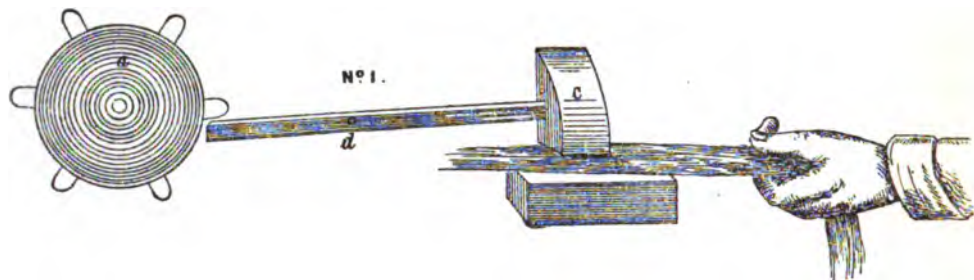
The patent in question was granted to Richard Arkwright, dated December 16, 1775, No. 1111, for "machines of utility in preparing silk, cotton, flax and wool for spinning." See specification and drawings.

The patentee obtained a patent in the same field of invention, dated July 3, 1769, which was, however, of but little service until the invention of the preparing machinery embraced in the patent involved in the present patent.

Upon the present trial, after some witnesses for the plaintiff had been examined, the substance of whose testimony is stated in the opinion of the court, a non-suit was asked on the grounds that the invention appeared to be a new

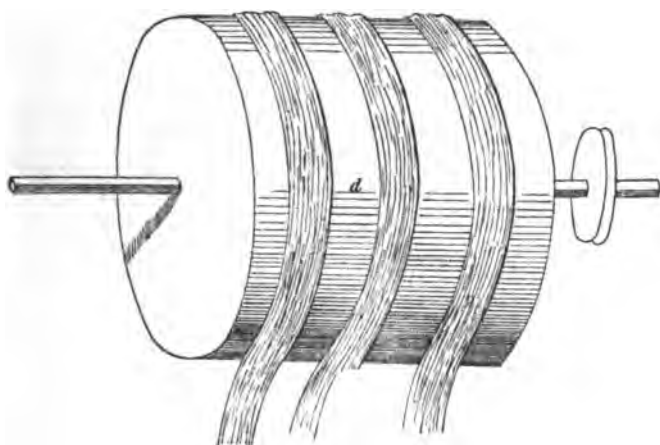


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ARKWRIGHT'S SPECIFICATION.

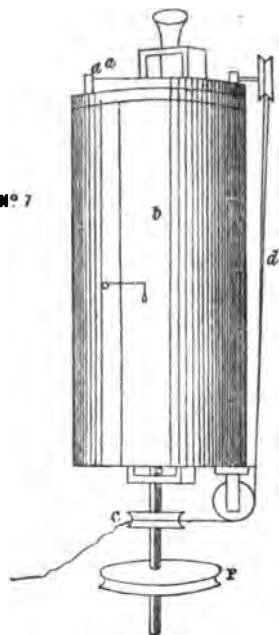


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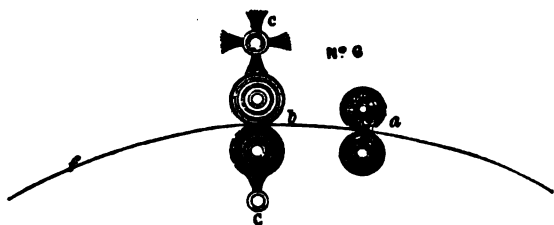
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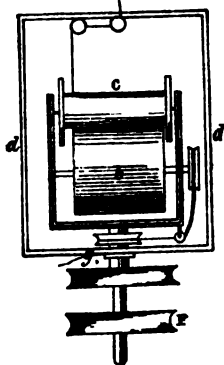
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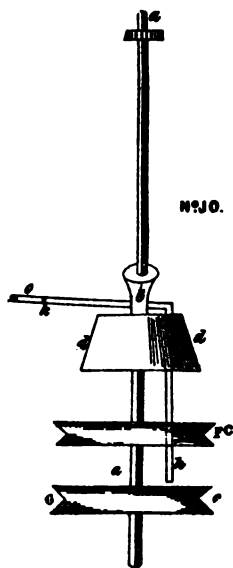
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A.D. 1775.—N^o 1111.

Arkwright's Machinery for Preparing Silk, Cotton, Flax, &c. for Spinning.

No. 1 : a beater or breaker of seeds, husks, &c., and a finer of the flax, hemp, and other articles which are to be prepared for dressing, in which *a* is a wheel with teeth, which, by acting upon a lever, raises the hammer *c*, the lever being movable upon the centre *d*. No. 2 : an iron frame with teeth at *a* working against a lower frame with like teeth at *b*; this lower frame is firmly connected to a wooden frame by means of the skews *c, c*. The upper teeth are made to act against the lower by means of the joints *d, d, d, d*. No. 3 is a piece of cloth, with wool, flax, hemp, or any other such materials spread thereon, as at *a*. No. 4 is a crank and a frame of iron with teeth at *a*, being movable at the joints *b, b, b, b*, by means of cranks and by a cord turning the pulley or wheel *c*. This motion of the teeth *a* works them backwards and forwards upon the cylinder No. 5, and dischargeth the cotton, wool, &c. from it at *d*. No. 5 is the last-mentioned cylinder, which hath fillet cards; behind this cylinder No. 3 delivereth its contents upon another cylinder. No. 6 consists of rollers fixed to a wooden frame, the contents of No. 5 being brought to it at *a*, and going through at *b*, produceth it a proper size *f*; *c, c* are brushes for clearing the machine. No. 7, a cylindrical box for twisting the contents of No. 6 at *b*; *a, a* are two rollers, one moving the other, between which the contents of No. 6 passeth into the cylinder *b*; *c* is a dead pulley fixed to the frame; *d* a cord, which, passing from the pulley *c*, moves the rollers *a, a*; *F*, a wheel, the movement of which is brought from *F*, No. 10, and is fixed to No. 6. No. 8, a machine for twisting the contents of No. 6, in which *d, d* is a frame of iron; *b* a roller on which a bobbin *c* is fixed; this is turned the same as No. 7, that is by a dead pulley or wheel fixed to a wooden frame at *g*. No. 9, a spindle and flyer, being fixed to No. 6, for twisting the contents from *b* in No. 6; *d* is pulley under the bobbin, which hath a communication by a band to No. 10 at *d, d*, it being a conical or regulating wheel, which moves the bobbin quicker or slower as required. No. 10, a spindle, which being fixed to No. 6 at *a*, worketh No. 7, No. 8, or No. 9, at *F, F, F*, by the pulley *F c*; *d*, a regulator for No. 9; *b*, a socket, having a bolt going through *d, d*, and *F c* to *G*, stops or sets the whole going by means of a catch *a*; for, the pulley *G, G*, being loose upon the spindle, *o*, a lever movable about *k*, raiseth or falleth the bolt *h*.

one, the application of which to an old machine was not described ; but the patent was for the invention of " certain machines for preparing the substance for spinning ;" also that the evidence did not apply either to the patent or the declaration, for the new invention would not work alone, but must be applied to the old machine.

[Lord LOUGHBOROUGH, C. J. I have known such objection overruled. In all the eyelet-hole work patents they are additions to the old stocking-frame, and they are not so described. I tried one of those causes last term ; the objection made at the trial was that the description was to be taken from the terms of the patent, which were loose and inaccurate. I was of opinion, then, that the description was to be looked for in the specification, the description of what was invented ; but upon that I am very confident there was no reference to the old machine.]

Some witnesses were then examined, who had made models to produce the intended effect from the specification alone, without any other knowledge of the machine. [The Chief Justice asked : Will any number of witnesses prove that this machine cannot be made from the specification ?]

Lord LOUGHBOROUGH, C. J., after further testimony had been given, the substance of which is stated in his charge, said to the jury : There is no matter of favor can enter into consideration in a question of this nature. The law has established the right of patents for new inventions ; that law is extremely wise and just. One of the requirements is that a specification shall be enrolled, stating the nature of the invention ; the object of which is that after the term is expired the public shall have the benefit of the invention ; but without that condition is complied with, the patentee forfeits all the benefit he derives from the great seal.

It has been said that many persons have acted upon an idea that Mr. Arkwright had no right, he having failed to establish it when this cause underwent an examination in another place (*Arkwright v. Mordaunt*, K. B. 1781, not reported) in which the event was unfavorable to him. If the

question at present were what damages he should have received for the invading that right, I would have allowed the parties to have gone into evidence to show to what extent persons have acted upon the faith of the former verdict ; but the question now is upon the mere right, and if the result of this cause is in favor of the plaintiff, the verdict will be with one shilling damages. A future invasion of this right would entitle Mr. Arkwright to an action for damages, but in the present case they are not asked.

It is said to be highly expedient for the public that this patent, having been so long in public use after Mr. Arkwright had failed in that trial, should continue to be open ; but nothing could be more essentially mischievous than that questions of property between A and B should ever be permitted to be decided upon considerations of public convenience or expediency. The only question that can be agitated here is, which of the two parties in law or justice ought to recover ?

There are many objections that may be taken to patents ; but the only objection in this case is, that the specification is not so intelligible that those who are conversant in the subject are capable of understanding it, and of perpetuating the invention when the term of the patent is expired. The clearness of the specification must be according to the subject-matter of it ; it is addressed to persons in the profession having skill in the subject, not to men of ignorance ; and if it is understood by those whose business leads them to be conversant in such subjects, it is intelligible.

The first witness described the machine in use before plaintiff's patent was obtained, which was simply applied to the purpose of carding ; all beyond that purpose that is contained in Mr. Arkwright's invention, I take to be perfectly new.

The next witness was the person applied to by Mr. Arkwright to draw up for him a description of his machines to be inserted in his specification. He says positively that the instructions given to him were not to conceal, but to make the description plain ; and Mr. Arkwright relied upon his skill and capacity for making that plain which Mr. Ark-

wright had communicated to him in the best manner he could.

[The learned judge then stated the evidence of four witnesses who had given their opinions upon theory, upon observation, and as men of skill and mechanical knowledge ; that the specification was sufficient to convey clear ideas to their minds, from whence they could direct the making of the machine.]

Mr. Wise says, he did actually make a machine from the specification, without any previous knowledge of the old machine, except a cursory view. Thomas Wood says, he never saw the plaintiff's works till last September. That about the time the patent came out he got a copy of the specification from the office, and from that copy actually made the machine ; and from the specification only applied the parts to the old carding-frame ; and that for three or four years they have been constantly in use. He says, fluted rollers were not new, they had been used by him years ago. William Allen made a model of the machine from the specification. He had never seen a carding-machine, but it was described to him by the person who brought him the specification. William Whitford, after considering the specification about an hour, undertook to make the machine. The old carding-machine was described to him, and he also made the machine. Both these witnesses said the conversation was perfectly fair, and that they were not led by anything said to them.

This is the evidence on the part of the plaintiff, and that evidence, to be sure, affords a very strong body of proof ; for the question being whether the specification is intelligible or not, the man who drew the specification says, he was desired to make it as plain as he could ; and he swears that, to the best of his judgment, he did endeavor to make it plain ; that is so far as to the fairness of the instruction. Then he and three other persons of skill swear that it is so intelligible to their apprehensions as to convey to them a clear idea of the manner of making the machine. Then five persons swear that they constructed this machine from the specification alone ; and one of them, divers years ago,

clearly from the specification alone, made the very machine to produce the very effect, and had it in work, producing the very effect produced by Mr. Arkwright.

The comment upon this by the defendant's counsel is that these were trials made by the plaintiff's desire, which should have been made with more caution; the persons should have been talked to before witnesses, but I cannot conceive that any evidence would have added force to the testimony that is given. Supposing Mr. Arkwright, in making these trials, to have made them in such a manner as to evade all suspicion, with the best precautions that the ingenuity of man could suggest, still nothing more could be attended to than the positive testimony of the persons who gave the description, and who received it. Now they swear that no other person gave them information, and the person who gave the information swears he gave them none but fair information; and one witness swears he had no information at all, but took it upon himself, taking a copy of the specification and using it.

The counsel for the defendant has called witnesses, many of them of undoubted character and skill, who say that from the specification they should not be able to make the machine; and most of them have said that they think it not probable that the person who drew the specification meant to describe the invention. Now that is nothing more than a corollary from their own opinion, because it is not intelligible to them.

The last witness is the attorney's clerk, who prepared the formal part of the specification, and engrossed the whole of it, and I think his evidence does not amount to a great deal. He says that when he observed to Mr. Arkwright that the specification was not so clearly drawn as he thought it might be, Mr. Arkwright's answer was, that it was not lately usual to make the specification too plain, lest the invention should be carried abroad, and seemed to regret that the specification was not locked up for fourteen years, as a matter of public convenience; but he added, he believed it would be sufficient for the security of his patent.

A good deal was said in the opening of the defendant's

case, that Mr. Arkwright meant to understate his description, so as to keep the world in ignorance of his invention ; and that, though he might do it to keep it from the French, yet that he had overshot himself, and had kept it from the subjects of this country ; that he had not complied with the grant, and must stand to the consequence. Now, unless a great deal of folly indeed is ascribed to Mr. Arkwright, you cannot apply that idea to his mind. He must necessarily put people in possession of it ; and it is plain, by the conversation he held with the attorney's clerk, that he thought the specification was sufficient, according to the terms of his patent, that he should make his invention sufficiently known.

The judge concluded by instructing the jury that the case turned merely upon one very short point : the reliability of the evidence of the five witnesses that they have made the machine from the descriptions in the specification ; that each of them had positively sworn they had done so ; and that, as they decided that point, so should they find their verdict for the plaintiff or for the defendant.

Verdict for the plaintiff.

REX v. ARKWRIGHT.

King's Bench, N. P., June 25, 1785.

Requisites and Sufficiency of Specification. Effect of Former Verdict as to Validity. Essentials of Improvement on Original Invention. New Trial.

The specification must fully disclose the invention, and contain nothing materially false or defective.

It must be such, in the case of a machine, that mechanics may be able to make the machine by following the directions of the specification, without any new inventions or additions of their own, and without information from other sources. In case of an improvement, any material alteration must be stated.

The insertion of more things than are requisite constitutes a fatal defect.

An alteration in a machine already in use must be new, material and useful to support a patent.

Acquiescence in a previous verdict adverse to the patent raises a presumption against it.

Scire facias to annul a patent.

The patent in question was that granted to Richard Arkwright, and is set forth in the last preceding case. The writ merely recited that "the grant is prejudicial and inconvenient to our subjects in general," and attacked it upon grounds which appear in the instructions of the court to the jury.

The defendant's pleas denied that the patent was prejudicial or inconvenient to the public, and alleged that the invention was new and was invented by the defendant, and that the specification particularly and sufficiently described it.

BULLER, J. Gentlemen of the jury, this is a scire facias brought to repeal a patent granted to the defendant for the sole use of instruments or machines which he represented to His Majesty that he had invented, and which would be of great utility to the public in preparing silk, cotton, flax and wool for spinning; and that these machines are constructed on easy and simple principles, very different from any that had ever yet been contrived; that he was the first and sole inventor thereof, and that the same had never been practised by any other person whatsoever. It was upon this representation made by the defendant that he obtained the patent now in question. The questions for your decision are three: 1. Whether this invention is new? 2. If it be new, whether it was invented by the defendant? 3. Whether the invention is sufficiently described by the specification?

It seems to me the last is the question of the greatest importance; because, if you should be of opinion upon that question that the specification is not certain enough, it may have the effect of inducing people who apply for patents in future times to be more explicit in their specifications, and consequently the public will derive a great benefit from it: and, therefore, I will state to you the evidence upon that

point first, and will endeavor to state it separately from all the evidence which is applicable to the other points of the cause. Upon this point it is clearly settled at law that a man, to entitle himself to the benefit of a patent for a monopoly, must disclose his secret and specify his invention in such a way that others may be taught by it to do the thing for which the patent is granted, for the end and meaning of the specification is to teach the public, after the term for which the patent is granted, what the art is, and it must put the public in possession of the secret in as ample and beneficial a way as the patentee himself uses it. This I take to be clear law, as far as it respects the specification ; for the patent is the reward, which, under the act of Parliament, is held out for a discovery ; and, therefore, unless the discovery be true and fair, the patent is void. If the specification, in any part of it, be materially false or defective, the patent is against law, and cannot be supported.

It has been truly said by the counsel that if the specification be such that mechanical men of common understanding can comprehend it, to make a machine by it, it is sufficient ; but then it must be such that the mechanics may be able to make the machine by following the directions of the specification, without any new inventions or additions of their own. The question is, whether, upon the evidence, this specification comes within what I have stated to you to be necessary by law, in order to support it.

The prosecutors have attacked it in almost every part. Some witnesses say that the feeder No. 3 cannot be made from the specification. Another says that the rollers were made in 1767 ; in 1769 they were the same as this and those used by the defendant ; the one was fluted, and the other covered with leather ; first they were fluted wood upon an iron axis ; the other was the same, only covered with calves' leather ; that he originally made them of a different proportion, and one to move faster than the other.

If there was any alteration that the defendant made that was material, that ought to be stated ; but in speaking of that article, the specification is perfectly silent as to the material or the form in which it should be made.

A witness, Kay, says, one roller turned faster than the other ; and there was a use in this, because it was to draw the cotton finer. In this also the specification is perfectly silent. In the plan one appears to be something smaller than the other, but how much, or what were to be the relative dimensions, or upon what scale they were to be made, the specification says nothing. Crofts, who was employed by the defendant to draw up the specification, told the defendant it was imperfectly done, and would not answer the purpose ; defendant said he meant it should operate as a specification, but to be as obscure as the nature of the case would admit.

I begin with this evidence, because it is very material to be considered whether the specification, in any part of it, bears a doubt ; because the obscurity of it was pointed out to the defendant before he made it, and he then professed to make it as obscure as he could ; his object was to get the benefit from the patent so far as putting money in his own pocket, but as to the benefit the public were to receive, it was to be kept back as far as it could. Immison says that from the specification he should have made a parallel cylinder, and not a spiral one, but this is the one used by the defendant. As to the rollers, it does not appear from the specification some were to go faster than others ; from the specification, without other sources, it is impossible to say how they should be made, as there is no scale or plan to work by. A roller is necessary to the feeder to give regular direction to the work ; it will not answer without it. From the knowledge he has now, he should add a roller if he was directed to make the machine. But that does not prove the specification to be sufficient, because if a man from the knowledge he has got from three trials, and seeing people immediately employed about it, is able to make use of it, it is his ideas improve the plan, and not the merit of the specification ; if he makes it complete, it is his ingenuity, and not the specification of the inventor. He says as to No. 5, it will not work five minutes together before it will be entirely full of cotton ; he is asked, supposing the cotton was to be spread upon the feeder only the breadth of the

fillers, would it have that effect? He says it would not do even then. [The judge here reviewed the testimony of other witnesses to the same effect as the foregoing.]

Mr. Pilkington says that Mr. Arkwright gave him some cases which he was to present to the House of Commons, and desired the witness would read them, and promised to send him more by his servant, which he did. Those which were delivered by the defendant seem to me to be material, because they show what the defendant's sense of this business was immediately after the first trial. It has appeared from what has been said upon both sides, and it was so stated in this case, that he was beat upon the first trial upon the subject I am now stating to you, that is, the specification. He admits in that he has not properly specified how the machine was made, and he says he purposely (in prevention of an evil, that foreigners might not get them) omitted to give so full a description of his inventions in the specification attending the last patent as he otherwise would have done. This he admits, and he goes on and states a trial in Westminster Hall in July last, at a large expense, when solely by not describing so fully and accurately the nature of his last complexed machines, as was strictly required by law, a verdict was found against him. He bows with the greatest submission to the court and the verdict against him, and he deprecates the favor of Parliament.

Now in a case where an invention is lucrative to so enormous a degree as you have heard, and where the verdict was given against him upon a particular point, had he not been most thoroughly convinced that the verdict was right, or if he could by any explanation have supported his specification, is it to be conceived for three years and a half he would lie by and totally lose the benefit of his patent? But excepting this application to Parliament, which does not go upon the grounds of his patent being good, but abandoning it on account of his own fault, and desiring favor and bounty there, he relinquishes the patent for three years and a half.

This is the evidence upon the part of the prosecutor against the specification, and it is material to see a little

how the defendant's counsel endeavor to support it. Here is a specification that states ten different instruments ; it is admitted by them that as to No. 8, it is of no use, and never was made use of by the defendant in his machine. It is also admitted, No. 9 stands exactly in the same situation, as these could not be put into the machine. This is a little extraordinary, for if he meant to make a fair discovery, why load it thus with things that they make no use of, and which are totally unnecessary ? That could answer no purpose but to perplex. But, say the counsel, we will show you that there were two machines, and they were two distinct things, for, say they, Nos. 3, 4 and 5 are the material parts of one machine, and those alone afford all the information necessary. Then, besides that, there is the roving machine, which consists of Nos. 6, 7 and 10, joined together. If that be the truth of the case, and there are to be two distinct machines to be made up by parts only of the instrument specified in this plan, let us see whether it is so said in the specification. There is not a word of it. It begins with the first, or No. 1, which is a breaker or beater of seeds and husks, and a finer of the flax, hemp, and other articles which are to be prepared for dressing. Then, says the counsel, there was a difference as to those things, because the hammer was proper for the hemp, and not proper for wool ; if there be that difference, it was necessary for the defendant to state it in his specification ; but he has made no distinction ; he has left to those who are to learn his art and secret to use the same machine for every part of it. He has not distinguished between the cotton and the flax ; the specification states that it is proper for everything. Is it so ? It is admitted it is not. Is there anything which states that these parts are for two machines, and how they are composed ? That the specification is totally silent about. What is there in the specification that can lead you to say that you must make use of three things for one of the machines and three for the other, and which three for one or the other ? and even if it were so, what is to become of the other four ? If those are of no use but to be thrown in merely to puzzle, I have no difficulty to say upon that

ground alone the patent is void, for it is not that fair, full, true discovery which the public have a right to demand from an individual who, under the sanction of Parliament, gets so great a reward as a monopoly for fourteen years together.

However, upon the part of the defendant, they have called several witnesses to show you it is perfectly intelligible, and that they can make the machines from this specification. Wilkinson took his information, or a great deal of it, from the defendant himself, and supposing it true that he or any other person instructed by the defendant, and having seen what he does, can make a machine from the specification, yet that will never support it, unless other people from the specification itself, who have any knowledge in the business, can also do it. That is not the case with this man ; but the last thing he says is also a material thing against the patent, for he says, for different purposes different proportions of the rollers are necessary. How is any man to find that out ? It is not said in the specification it must be different in the one case from the other, and that you are to have different rollers for hemp or for cotton. All this remains to be the subject of a future discovery. Moore says, with due attention to the old machine, and an accurate attention to the specification, I could direct a skilful artificer to make the machine. This is all that a very ingenious sensible man can say of this specification. He has examined the instruments and machine, and seen a great deal of it between the trials, and at last he believes, with all the extreme caution that I have mentioned to you, that he could direct a skilful artificer to make the machine. He says, that as to No. 3, a piece of cloth with cotton or any other material that was to be carded, rolled up in it, would certainly move much better and more steady with a roller within side, but it would do without it. If wanted, he thinks it would easily occur to a mechanic to put it in, that is, that a sensible man would have understanding enough to supply any defect in this specification ; but in this case it proves the specification is insufficient. It will not do of itself, but wants something to be added, it is deficient, and

there is nothing in the specification that imports there should be a roller in it.

Now it is admitted by the former witnesses, if there are sections of rollers, there ought to be a scale, and there is no scale, there is nothing in the plan to show the different comparative velocity of the rollers, but there will be a difference, because the one is larger than the other in diameter.

You see how that applies to this part of the evidence. There is nothing, says he, that shows what the difference of velocity should be ; that remains for experiment hereafter. Is that the case with the defendant ? No, he knew to a certainty what it was. The man that comes to give an account of the invention, says, I had calculated it, and the difference of the velocity was to be as five to one ; this is the way I made my rollers. Now the defendant has not said a word of that in his specification. In that he has kept back the knowledge he had as to the size of the rollers, and velocity, and it is left to people to find it out as chance may direct.

Wood put Nos. 4, 5, 6 and 7, together, and that machine he has worked ever since ; he don't recollect that the defendant used anything else. If that be true, it will blow up the patent at once ; he says he believes nobody that ever practised would find anything necessary upon this paper but the Nos. 4, 5, 6 and 7 ; he should look after no others. Now if four things only were necessary instead of ten, the specification does not contain a good account of the invention. As to the can, he made use of it without rollers at the mouth ; he thinks it answers just the same without it.

This is the evidence that relates to the specification upon the one side and the other. You see upon the part of the prosecution they have called to you very ingenious men, that seem to be much beyond what are called common mechanics in life ; they have all told you it is impossible for them to make the machine according to the specification.

Upon the other hand, several respectable people are called upon the part of the defendant, who say they could do it, but there is this difference in their description ; most, if not

every one of them, have looked at and seen how the machines were worked by the defendant, and have got their knowledge by other means, and not from the specification and plan alone ; besides, they admit the manner the defendant works it is not consistent with the plan laid down, particularly as to the cylinder, a particular part of the business, for Moore says, this upon the face of it must be taken to be a parallel, whereas that which plainly appears to be used is a spiral ; besides, after all this, they have spoken most of them in a very doubtful way, particularly Mr. Moore, who qualified his expression in the way which I have stated to you, and the others qualifying their expressions, saying they think upon the whole they could do it. Suppose it perfectly clear they could with the subsequent knowledge they had acquired, yet if it be true that sensible men that know something of this particular business, and mechanics in general, cannot do it, it is not so described as is sufficient to support this patent. It will be for you to say upon this part of the case whether you are satisfied this specification is such, as, with the plan, it may be made from it or not, taking the old machine into its assistance, which by the by the specification has not taken notice of as known. If you think it is not sufficiently described, that alone puts a complete end to this cause, and then it will be unnecessary to trouble you with any other.

As to the other points, there are two : first, whether it is a new invention ; and, in the next place, whether it was an invention made by the defendant. Now if, in your opinions, it is material to go into these points, I think the law in general is very different on them from what I have stated in the specification, because in the case of an invention many parts of a machine may have been known before, yet if there be anything material and new which is an improvement of the trade, that will be sufficient to support a patent ; but whether it must be for the new addition only, or for the whole machine, would be another question. It seems to me not to be necessary now to state precisely how that would be, because this patent is attacked upon the ground that there is nothing new ; therefore I will go over

the articles one by one, and see what is stated upon the different articles which are here mentioned.

No. 1 it is said is not stated by the specification to be joined to anything else, and therefore it must be taken to be a distinct thing. It is admitted that is not a new discovery, for Emmerson's book was produced, which was printed a third time in the year 1773, and that is precisely the same as this. Lees says he is the inventor of the old feeder; that he made it in 1772, and in August, 1772, he worked with it, and that it is now commonly used in his country. He has never seen the defendant's used, but the description of the defendant's is the same as his.

This also shows, first of all, that it is no new invention; secondly, it is not invented by the defendant, for this invention is spoken of as used before the time of the patent; and in the next place, it is proved to you not to be the invention of the defendant, by the person who actually invented it. It is proved that the crank (No. 4) was invented between thirteen and fourteen years ago by Hargreave, and used publicly in two factories where men came to work. If that be so, that will put an end to this article of the crank. Some of the witnesses have proved them made in great numbers, and used in different factories publicly, and they have proved it by the persons who made them. Upon the part of the defendant, the witnesses never having heard of it may be perfectly true, and yet no contradiction to the evidence for the prosecution. As to No. 5, the filetted cylinder, Wood proves it used long before the defendant's patent; he confirms what was said by the other witnesses; and what the other witnesses have said against it is nothing at all to this article; for here it is proved to be used in both ways, in the manner the defendant has used it now, and likewise being carded quite through.

Now if it was in use both ways, that alone is an answer to it; if not, there is another question, whether the stripe in it makes a material alteration? for if it appears, as some of the witnesses say, to do as well without stripes and to answer the same purpose, if you suppose the stripes never to have been used before, that is not such an invention as

will support the patent ; upon that ground it is fully answered.

As to No. 6, there is no contradiction to the evidence of Hayes and Kay, that the rollers were made before, and used in the different ways I have stated to you, and that the defendant got the secret from them. Then the seventh article is what they call the can. Holt says, the only difference between the two, the spinning-machine and the present roving-machine, is, that the latter has a can ; and indeed that at one time was admitted by the counsel for the defendant.

If it be so, it brings the case to a short point indeed, for if nothing else is new, the question is, whether it is material or useful ? The witnesses upon the part of the prosecution say it is of no use at all. In the first place, they had that before which answered the same purpose, though not made exactly in the same form ; it was open at top, it twisted round and laid the thread precisely in the same form, and had the same effect this has. So if it was new it is of no use, but they say it is not new, for though it was not precisely the same shape, in substance it was the same thing ; that is not contradicted. That part also stands without any contradiction upon the part of the defendant, for the defendant's witnesses satisfy themselves with telling you they think it intelligible, and it might do without the roller, though it might not be so effectual as with the roller. It is admitted by several it could do without, that appeared from the experiment made ; they showed you by one of the engines how it did with the roller and how without ; and that it was done without just the same as with it. As to 8 and 9, it is admitted those are entirely out of the cause, and may be used, says the counsel for the defendant, instead of No. 7.

But it is a question whether this is the fair construction of the specification. Suppose it was so, it is perfectly clear the defendant has never used either of them, and some of the witnesses tell you they cannot use them at all. One tells you they cannot be used, and, therefore, it is a little unfortunate they got into this specification, if nothing more

was meant than to make a fair discovery of what was useful ; but in this manner the description is given. As to No. 10, nothing is said about it for the defendant. Mr. Moore said it was not difficult to conceive it ; but there is no witness that says at all what the use of it is ; so this seems to stand without any evidence at all.

Gentlemen, thus the case stands as to the several component parts of this machine ; and if upon them you are satisfied none of them were inventions unknown at the time this patent was granted, or that they were not invented by the defendant ; upon either of these points the prosecutor is entitled to your verdict.

If upon any point you are of opinion with the prosecutor, you will find a verdict for him.

If upon all the points you are of opinion for the defendant, you will find a verdict for him.

Verdict for the Crown.

REX *v.* ELSE.

King's Bench, N. P., Mich. T., 1785.

Novelty. Extent of Claim.

The specification in a patent for the manufacture of lace stated the invention to consist of mingling silk with other thread to give greater strength and fineness to the fabric than had previously been obtained without it. No particular mode of mixing was specified, and there was proof that silk had previously been mixed in the manufacture of lace thread. *Held*, that the patent was void, though the previous mode of mixing might have been inadequate for lace-making.

Scire facias to annul letters patent granted to Arthur Else, dated October 29, 1779, for "a certain new invented manufacture of lace, called French, or wire-ground lace, which is much stronger than any hitherto invented or found out, and also of an entire new construction."

By these presents the said Arthur Else hath described and ascertained, and doth fully and particularly describe

and ascertain, the nature of his said new invented manufacture of lace, called French, or wire-ground lace, and also the manner of working the same, that is to say, by mingling, twisting or weaving a fine thread of silk, or such other material that may answer the purpose of silk, to and with thread, flax, hemp, cotton, or any other manufacture, which usually hath been or may be worked on a stocking-frame, which addition of silk to thread, flax, hemp, cotton or other manufacture, gives strength, firmness and durability to the work, binding the other materials, and preventing the same being or appearing so rowdy and uneven as works of that sort are, and hitherto have been, without such addition. The manner of working the same is as is common in the making or working open-work, eyelet-hole, net-work, lace-work, etc., and on the stocking-frame with the addition thereto commonly used, or by such other engines and machine by which any such work can or may be made to any particular stitch that the workman may think proper.

Upon the trial the prosecutor, having shown that, prior to the patent, silk and cotton thread had been intermixed upon the same frame, defendant's counsel offered to prove that the former method of using the silk and cotton thread was quite inadequate to the purpose of making lace on account of its coarseness, and that the defendant alone had invented the method of intermingling them so as to unite strength with fineness.

BULLER, J. Such proof will be to no purpose. The patent claims the exclusive liberty of making lace, composed of silk and cotton thread mixed, not of any particular mode of mixing it; and therefore, as it has been clearly proved and admitted that silk and cotton thread were before mixed on the same frame for lace, in some mode or other, the patent is clearly void, and the jury must find for the Crown.

Verdict for the Crown.

REX v. ARKWRIGHT.

King's Bench, Nov. 10, 1785.*New Trial. Expectation of New Evidence not a Ground.*

A new trial will not be granted upon affidavits that the applicant believes that if it be granted, he may have more evidence. *So held* in a *scire facias* to repeal a patent.

Rule for a new trial.

After the trial of *Rex v. Arkwright* (*ante*, p. 29), Adair, for the defendant, applied for a rule to show cause why there should not be a new trial on affidavits of defendant (and other persons) to the following effect: 1. That defendant was led to suppose that upon two trials on a question of such importance no evidence which appeared material to the party would have been suppressed, and that they had gone into all the cases that could be made against the patent; that under these apprehensions he did not expect them to adduce, in the next stage of the business, and after so many trials, evidence to attack that which he was conscious could not be justly attacked, the originality of the invention. He went, therefore, into the defence, and instructed his counsel, with a view to the question merely of specification, and came to the trial on the *scire facias* altogether unprepared with respect to the evidence that appeared as to the novelty of the invention, except so far as the witnesses that were accidentally called to explain the specification could speak upon the subject; that he, consequently, was not prepared with that evidence which he would have adduced to contradict and explain the evidence to deprive him of the originality of the invention. Also, that he could adduce evidence to explain the use of several articles in the specification, said to have been introduced only for the purpose of puzzling and perplexing.

That the evidence respecting the want of novelty of the crank could be contradicted most positively by fresh evidence.

LORD MANSFIELD, C. J. It is very clear to me, upon your own showing, there is no color for the rule; the ground of it is, if there is another trial, you may have more evidence. There is no surprise stated, no new discovery. but, upon the material points in question, you can give more evidence. There were two questions to be tried, that is, the specification and the originality of the invention; there has been one trial in this court, another trial in the Common Pleas, where this patent has been questioned, and this proceeding is brought finally to conclude the matter, for it is a scire facias to repeal the letters patent. The questions to be tried are stated upon record; there is not a child but must know they were to try the questions there stated; they come prepared to try them, they have tried them, and a verdict has been found which is satisfactory to the judge, and now you desire to try the cause again only that you may bring more evidence.

Rule refused. Judgment to cancel the patent.

TURNER v. WINTER.

King's Bench, Feb. 5, 1787.

Ambiguity in Specification. Misstatement. Burden of Proof as to Sufficiency.

Ambiguity intentionally introduced into the terms of a specification, or a direction therein tending to mislead, avoids the patent.

The enumeration of ingredients or processes which will not answer the purpose claimed, or of substances not necessary to the production of the patented article, avoids the patent.

In a suit for infringement, the plaintiff must give some evidence of the sufficiency of the specification unless this is admitted.

Motion to set aside verdict for plaintiff and grant a new trial.

The action was a case for infringement of a patent dated February 26, 1780, for a method of producing a yellow color for painting in oil or water, making white lead, and

separating the mineral alkali from common salt, all to be performed in a single process.

The specification was as follows: "Take any quantity of lead and calcine it, or minium, or red lead, litharge, lead ash, or any calx, or preparation of lead fit for the purpose; to any given quantity of the above-mentioned materials; add half the weight of sea salt, with a sufficient quantity of water to dissolve it, or rock salt, or sal gem, or fossil salt, or any marine salt, or salt water proper for the purpose; mix them together by trituration till the lead becomes impalpable, or sufficiently comminuted. When the materials have been ground, let them stand for twenty-four hours, in which time the lead will be changed to a good white, and the salt decomposed; if not, the trituration must be repeated with the further addition of salt, till the white color be obtained; the decomposition of the salt may also be brought about by digestion or by calcination. The materials may be suffered to remain together before the alkali is separated by the addition of water, for a longer time than is specified above, according to the discretion of the operator, and the end he wishes to obtain. The yellow color is produced by calcinating the lead after the alkali has been separated from it, till it shall acquire the color wanted; this will be of different tints according to the continuance of the calcination, or the degree of heat employed. The white lead must be finished by repeated ablutions, and by bleaching it until the white be made perfect."

At the trial, evidence was produced on behalf of the plaintiff that the first effect of the process was the separation of the mineral alkali from common salt; that this produced white lead; and that by continuing the process to a certain degree and afterward exposing the matter the yellow color was produced. That as the specification required the heat to be continued till the color was obtained, any person trying the experiment would necessarily be led to fusion. That a chemist would see by the specification that if less heat would not answer the purpose, he must go on to fusion. The difference between fusion and calcination, both of which proceed from different degrees of heat operating upon the

subject-matter, was that the substance to be calcined continued in a solid form, whereas fusion is a liquid state to which the substance may be reduced by continuing the heat. Instances were produced of persons who had made the color by the help of the specification, after trying some experiments. In trying those experiments, minium had been fused in the first instance. The white lead produced by following the directions in the specification was not what was sold as such, but a white substance, the basis of which was lead.

For the defendant it was proved that the patent color could not be made by following the directions of the specification. For calcination was not sufficient to produce the effect intended ; it was necessary to go on to fusion. That as it appeared upon the specification minium, or red lead, might be considered most convenient for the purpose, because a previous process was necessary to reduce lead to minium, or litharge, before the other parts of the process were to be begun, minium and litharge differing only in having undergone different degrees of calcination. But that minium would not produce the effect unless first fused. And that if red lead were calcined, the experiment would not succeed without fusion ; whereas, according to the terms of the specification, fusion should be cautiously avoided. That the specification was calculated to mislead also with respect to the salts. For fossil salt is a generic term, including all mineral salts ; but only one species of fossil salt, namely, sal gem, has marine acid, without which the color could not be produced. That several persons had tried to make white lead by the specification, but had not succeeded. They could only produce a grayish white powder, quite unfit for painting, and not merchantable.

Upon the hearing of the motion Buller, J., after reporting the above facts, observed that at the trial three objections had been taken to the specification. 1. That, after directing that lead should be calcined, it directed another ingredient to be taken, which would not answer the purpose, viz., unium. Neither was it said that the minium should be calcined or fused ; but if it had any reference to

the preceding words, then it should be calcined, which would not produce the effect, fusion being necessary. 2. That "fossil salt" was improperly mentioned. There were many kinds of fossil salt, only one of which, viz., sal gem, would answer the purpose, because it must be a marine salt. 3. That all these things put together did not produce the thing intended. And that the patent was for an invention to do three things in one process, whereas one of them, viz., white lead, could not be produced at all; for that a white substance like white lead remained, applicable only to some of the purposes of common white lead. The learned judge then said that at the trial he had told the jury that if any of these objections were well founded, it would avoid the patent.

Erskine and Piggot showed cause against the rule for granting a new trial, and contended that in actions for infringing patents, it is not necessary for the plaintiff to give any evidence to show what the invention is, but that it is incumbent on the defendant, if he objects to the specification, to show that it is defective, and that persons acquainted with the subject could not, by the assistance of the specification, effect the thing intended. The consideration which the patentee gives for his monopoly is the benefit which the public are to derive from his invention after his patent is expired; and that benefit is secured to them by means of a specification of the invention. But it is not necessary that that specification should be such as that persons unacquainted with the terms of art, which must necessarily be used in writing it, should be able to understand it. It is sufficient if persons of skill can understand the process by means of the specification, so as to keep alive the discovery after the patentee's exclusive title is expired.

The first objection which has been raised against the sufficiency of the specification has no weight; for though the direction to calcine is applicable to all the ingredients in the first part of the description, yet scientific persons would instantly discover what degree of heat was necessary to be used to each of those ingredients, and that minium, being

already a calx, must be fused. Moreover the heat is ordered to be continued till the experiment succeeds and the color is produced. Fusion is a necessary consequence of continuing the heat, and this direction would be sufficiently understood by all persons acquainted with the subject.

As to the second objection, with respect to the "fossil salt." The specification begins with "sea salt," which is the genus; then it afterward states not "any fossil salt," but "fossil salt," or "any marine salt;" the marine salt is therefore the basis of the experiment. So that no fossil salt but what is likewise a marine salt can be taken under this description.

The answer to the third objection is, that a species of white lead is produced, though not the common ceruse; and the patent does not profess to make the common white lead. Besides, the making of white lead was not the subject of the present action, which was for making the yellow color; which accounts for the plaintiff's not being prepared to prove this part of the specification. Upon the whole, this was a mere matter of evidence, as to the sufficiency of the specification, upon which the jury have exercised a sound discretion.

Bearcroft, in support of the rule, was stopped by the court.

ASHURST, J. I think that, as every patent is calculated to give a monopoly to the patentee, it is so far against the principles of law, and would be a reason against it, were it not for the advantages which the public derive from the communication of the invention after the expiration of the time for which the patent is granted. It is, therefore, incumbent on the patentee to give a specification of the invention in the clearest and most unequivocal terms of which the subject is capable. And if it appear that there is any unnecessary ambiguity affectedly introduced into the specification, or anything which tends to mislead the public, in that case the patent is void. Here it does appear to me that there is at least such a doubt on the evidence that I cannot say this matter has been so fully and fairly examined as to

preclude any farther investigation of the subject. Three objections have been made to this specification. The first is that in the specification the public are directed "to take any quantity of lead and calcine it, or minium, or red lead;" from whence it is inferred that calcining is only to be applied to *lead*. I confess, if the objection had rested here, I should have entertained some doubt.

The next objection is that in the subsequent materials to be added, the public are directed to add "half the weight of sea salt, or sal gem, or fossil salt, or any marine salt." Now "fossil salt" is a generic term, including "sal gem" as well as other species of fossil salt. And I understand that sal gem is the only one which can be applied to this purpose; so that throwing in fossil salt can only be calculated to raise doubts and mislead the public. That word could not have been added with any good view; it must produce many unnecessary experiments; therefore, in that respect, the specification is not so accurate as it ought to have been.

Another objection was taken as to the white lead; to which it was answered that the invention did not profess to make common white lead. But that is no answer; for if the patentee had intended to produce something only like white lead, or answering some of the purposes of common white lead, it should have been so expressed in the specification. But in truth, the patent is for making white lead and two other things by one process. Therefore, if the process, as directed by the specification, does not produce that which the patent professes to do, the patent itself is void. It is certainly of consequence that the terms of a specification should express the invention in the clearest and most explicit manner, so that a man of science may be able to produce the thing intended without the necessity of trying experiments.

BULLER, J. Many cases upon patents have arisen within our memory, most of which have been decided against the patentees, upon the ground of their not having made a full and fair discovery of their inventions. Whenever it appears

that the patentee has made a fair disclosure, I have always had a strong bias in his favor, because, in that case, he is entitled to the protection which the law gives him. How far that law which authorizes the king to grant patents is politic, is not for us to determine. When attempts are made to evade a fair patent I am strongly inclined in favor of the patentee ; but where the discovery is not fully made, the court ought to look with a very watchful eye to prevent any imposition on the public. Then the question is, whether the present plaintiff has made a fair discovery. I do not agree with the counsel who have argued against the rule in saying that it was not necessary for the plaintiff to give any evidence to show what the invention was, and that the proof that the specification was improper lay on the defendant ; for I hold that a plaintiff must give some evidence to show what his invention was, unless the other side admit that it has been tried and succeeds. But wherever the patentee brings an action on his patent, if the novelty or effect of the invention be disputed, he must show in what his invention consists, and that he produced the effect proposed by the patent in the manner specified. Slight evidence of this on his part is sufficient, and it is then incumbent on the defendant to falsify the specification. Now in this case, no evidence was offered by the plaintiff to show that he had ever made use of the several different ingredients mentioned in the specification ; as, for instance, minium, which he had nevertheless inserted in the patent, nor did he give any evidence to show how the yellow color was produced. If he could only make it with two or three of the ingredients specified, and he has inserted others which will not answer the purpose, that will avoid the patent. So if he make the article for which the patent is granted with cheaper materials than those which he has enumerated, although the latter will answer the purpose equally well, the patent is void, because he does not put the public in possession of his invention, or enable them to derive the same benefit which he himself does.

As to the first objection which has been taken with respect to the minium, it was not pretended by any of the

plaintiff's witnesses that he ever made use of minium. And it was proved by the defendant's witnesses that from the specification they should be led to use minium, because minium is lead already calcined, which is what the specification directs in the first instance. But minium will not answer the purpose. Then as to fusion ; it is said that the public are directed by the words of the specification to continue the heat till the effect is produced, which must necessarily lead to fusion, though fusion is not expressly mentioned. But that is no answer to the objection ; for the specification should have shown by what degree of heat the effect was to be produced. Now it does not mention fusion, and as one of the witnesses said, in order to produce the effect "you must go out of the patent ;" for fusion is beyond calcination, and, in some sense, contrary to it ; and by mentioning calcination, it should seem that fusion was to be avoided.

The next objection was as to the salts ; "fossil salt" is mentioned as a distinct species of salt, and many other salts are also mentioned, as indifferent whether one or the other be used. But it was proved that fossil salt was a generic term, including several species ; and that "sal gem" was the only species of it which would answer the purpose, because none of the others contained a marine acid, which was essential.

There was no contradiction by the witnesses on the third objection ; for the most that the plaintiff's witnesses said was that, following the specification, the experiment only produced a white substance like lead.

Now on either of these grounds the patent is void. Because, if the patentee says that by one process he can produce three things, and he fails in any one, the consideration of his merit, and for which the patent was granted, fails, and the Crown has been deceived in the grant. Slight defects in the specification will be sufficient to vacate the patent. In a case before Lord Mansfield (*Liardet v. Johnson*, *ante*, p. 22) for infringing a patent for steel trusses, it appeared that the patentee, in tempering the steel, rubbed it with tallow, which was of some use in the operation ; and



References.

Fig. I. Represents the valve which is placed under the Basin

Fig. II. That which is under the bottom of the reservoir

Fig. III. A Spring which opens and shuts the valve Fig II.

A. A board or plank to which the Apparatus is fixed.

B. The Led Box or part where the Valve Fig I hath its place

C. A Crank or Tumbler joined to the Axis a which moves the

*D. A Lever having its end joined to the Spring E which cuts
against the Crank or Tumbler C and keeps the Valve*

*F. The handle which being pulled upwards Causes both V
and being pressed Downwards shuts them*

G. The waste pipe of the Basin

H. H The feeding pipe which supplies the Basin

*I. The Led Box joined to the pipe H. H & M the Reservoir
Box the Valve Fig II hath its place and motion*

*K. The Pipe or Tube through which the Valve hath its me
communicated*

*L. L. L. Cranks and Wire joined to the Spring Fig III at b
moves the Valve in the Box L.*

M. The Reservoir

*N. N. A Wire or Rod joined to the Valve at III and is contin
through the Pipe K to the Spring Fig III to which it
Joined at n n*

Bramah's Water-closet.

The merits of this my Invention depends chiefly on two valves so situated and constructed as totally to prevent the great inconveniences complained of in every sort of water-closets heretofore made use of; one of these valves is placed at some distance from the bottom of the bason in the soil pipe, or a led box joined to the said pipe proper for receiving it; tho the other is in the upper part of the feeding pipe, or a led box which is joined to the said pipe and to the reservoir; these valves being both actuated by one movement causes fresh water to be admitted into the bason, at the same time its contents is discharging. The intention and effects of the valve which is fix'd under the bottom of the bason, is to reserve a proper quantity of water therein, and by that means cuts of all communication of smell or stench which might otherwise arise from the soil pipe, drains, or seepool; this valve moves on a horizontal axis, and in such a direction that its surface is the thoroughly washed every time the contents of the bason is discharged, both by the water's falling upon it whilst opening, and by its meeting the water when shutting to again; the intent of the other valve being placed in the top part of the feeding pipe is to cause such pipe always to be left empty, in order to prevent the bad effects of the frost, which hath always been a complaint of water-closets; this valve opens and shuts in a manner similar to that already to that already described, all ways meeting the natural currency of water when shutting, and falls from it when opened, and is not liable at any time to have its motion obstructed by the frost, no part of it being immersed in water. Its movement is communicated through a lead pipe or tube soldered into the part where it acts, and is continued above the highest surface of the water in the reservoir, so that this movement is not exposed to the water which is retained in the reservoir, which is the particular advantage of this part of this Invention, which hath not hitherto attended any other kind of water-closets, since all valves, plugs, &c., yet made use of for this purpose have had their movements in the water they are meant to retain; for which reason they were always liable to be set fast by the frost, and thereby rendered useless during the continuance thereof. The bason for this water-closet may be many ways varied in shape and size, without prejudicing any of the essential properties already mentioned. The Figure or Drawing hereunto or hereunder annexed will more plainly shew the true nature and disposition of the parts of this Invention.

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because this was omitted, the specification was held to be insufficient, and the patent was avoided.

Rule absolute for a new trial.

BRAMAH v. HARDCASTLE.

King's Bench, N. P., Trin. T., 1789.

Novelty. Prior Use. Extent of Claim.

In determining the question of novelty the question for the jury is, whether the principle of the invention, and the means employed to effect the object to be attained, are new ; whether the shape is new or not is immaterial.

Action on the case for infringement.

The patent was granted to the plaintiff, Joseph Bramah, dated January 27, 1778, for a newly constructed water-closet. See copy of the specification and drawing.

There was proof that plaintiff had made two or three of these machines before he obtained his patent ; but *Bearcroft*, for defendant, admitted that that circumstance would not invalidate the patent unless the invention had also been used by others, as the statute empowered the king to grant the monopoly for fourteen years of any manufacture to the first inventors which others at the time of making shall not use. He also admitted that for an addition the Crown may grant a new patent ; but insisted that the wires passing through the pipes was the only part new for which the plaintiff could have had a patent ; whereas, he urged, this patent goes further, claiming the monopoly of the whole water-closet as if plaintiff were the inventor of the whole ; the patent is therefore void. If any part which the patentee claims by his patent be not new the whole patent is void. The specification claims the valves ; they are not new, but have been applied to water-closets before. [Lord Kenyon assented.] The defendant's witnesses proved these facts, and that a valve and plug had been used to the same water-closet.

Erskine, for the plaintiff, admitted that valves were not new inventions, but insisted that the application of them to this machine in the manner described, by placing them horizontally, so that they open downward, thereby acting more freely and without any obstruction, and free from filth, was new. He contended that for that new invention, and not for the basin, pipes and valves themselves, is the patent sought or obtained. If the objection would hold, no patent for any mechanical invention could be maintained, because all the mechanical powers amount but to five, and are all well and anciently known. No protection should be granted for the sole publishing of any book, because all the letters and words of which it is compounded were well known and understood before. The same will hold of watches, which go upon wheels that were used, and upon the same principles, in mills before they were so applied to watches. The question, therefore, is, not whether the valve was new, but whether a valve had been so used or applied before, to obtain this effect, before applied to the same use; and he insisted that the valve thus used was never so used before, consequently was a new invention. We do not seek by the patent to prevent persons from doing what they had done before. Suppose a person had done this by a valve placed vertically instead of horizontally, no action would lay for it; it would be no infringement.

LORD KENYON, C. J. I doubt that; if a thing so near was done, I think it would be an infringement. In my opinion, the stress of the cause mainly depends upon this, whether the thing granted by the patent be entirely new. The conducting of the wire through the hollow tube, to prevent obstruction from frost, I admit, is very ingenious and perfectly new, but is not claimed by the patent. Unlearned men look at the specification, and suppose everything new that is there. If the whole be not new, it is hanging terrors over them. The plaintiff goes to the king, saying, Here are offensive smells; these are prevented by two valves, causing the water to rush in and out at the same time. That is not new; in a former machine there was one valve

and a plug. The question for your consideration is, whether in principle that is the same, whether the effect obtained of stopping the apertures is by the same means. Whether those means differ in shape or not, I think is not material. His lordship concluded with telling the jury the patent was void, the invention not being new; and that they should find a verdict for the defendant.

Verdict was given for the plaintiff, however, and was not disturbed.

OLDHAM v. LANGMEAD.

This case is cited in the case next following, Hayne v. Maltby. No materials for preparing a full report have been found.

HAYNE v. MALTBY.

King's Bench, Nov. 17, 1789.

Covenant not to Use. Estoppel.

A covenant by an assignee of a patent right that he shall be allowed to use the invention, and that he will not use any similar one, does not estop him from denying the validity of the patent.

Demurrer to pleas in action of covenant.

The action was founded on articles of agreement which recited that the plaintiffs were assignees of T. Taylor, of a patent for an engine or machine to be fixed to a common stocking-frame, for making a sort of net or open work, called point net; and that the defendant had applied to the plaintiffs for their permission to use a stocking-frame to one of their patent machines, to which they had consented, on condition of his working it in the manner described in the specification; and then stated a covenant by the plaintiffs with the defendant, that he might, during the remainder of the term of the letters patent, freely use and employ one stocking-frame, with their patent engine or machine thereto,

in case the same should be worked only in the manner described by the specification, without any interruption by them ; and also a covenant by the defendant that he would not, during the residue of the term of the letters patent, use or employ any of the patent engines, or any engines resembling the same, except the stocking-frame and machine in the articles allowed to be employed by him. The declaration also alleged enjoyment by defendants of the invention without interruption from plaintiffs ; another assigned two breaches of defendant's covenants ; one for using and employing patent engines or machines, other than and besides that by the agreement allowed to be employed by him ; the other for using engines or machines resembling the patent machines.

There were five pleas ; the first two are immaterial. The third plea set forth the patent, which stated a petition by the patentee, calling himself the inventor of the machine, and contained the usual proviso, that the patent should be void if the patentee did not enroll a specification of his invention in Chancery in four months ; and then averred that the patentee did not enroll such specification. The fourth plea alleged that the invention mentioned in the patent was not a new invention ; and the fifth, that the invention was not discovered by Taylor, the patentee.

The plaintiffs demurred to these pleas because the defendant attempted to put in issue matters foreign to the merits of the cause, inasmuch as he was estopped by his deed from putting those matters in issue here.

Wigley, in support of the demurrer, contended that the defendant was estopped by his deed to say that this was not a new invention, or that it was not discovered by the patentee. Wherever a party has entered into a specialty, he cannot afterward be permitted to say that he received no consideration for it, though he may plead that the consideration was illegal. In *Oldham v. Langmead* (see *supra*), tried before Lord Kenyon, at the sittings after Trinity Term, 1789, where the action was brought by the assignee of the patentee against the patentee, his lordship would not permit the latter to show that it was not a new

invention against his own deed. If, in point of fact, this were not a new invention, the defendant should have repealed the letters patent by scire facias, and then applied to the Court of Chancery to have had the deed delivered up to be cancelled. But by his deed he has admitted that the plaintiffs had a title ; and, as long as the term mentioned in it exists, he is estopped from denying it ; in the same manner that a tenant who holds under a demise from his landlord is, in answer to an action for rent.

Chambre, on the other side, argued that the defendant is not estopped by his deed to show that he has entered into this covenant, not only on an illegal consideration, but also without any consideration. A person cannot indeed aver against a record, though he may against the operation of it. Here then, as the deed recites that the plaintiffs were in possession of a patent, the defendant is perhaps estopped to deny it ; but it cannot estop him from denying the operation of it. In this indenture the plaintiffs do not assign the patent to the defendant. They only covenant that the defendant may use the engine in a certain manner which he might have done without the covenant. For, on this record, it must be taken that the invention was not new ; and then this is a covenant without consideration or entered into for an illegal consideration, because it operates in restraint of trade. In *Mitchell v. Reynolds* (1 P. Wms. 181) it was held that a covenant in restraint of trade in a particular place, if without consideration, or in restraint of trade generally, was void. And this also answers the argument of estoppel ; for no deed of this sort can operate by way of estoppel, as it is against public policy. Neither could it be necessary for the defendant to sue out a scire facias to repeal the patent, before he disputed its validity ; because in all actions brought by a patentee for infringing the patent, it is incumbent on him to make out his right.

Wigley, in reply, contended that this is not a void consideration ; but if it were, it will not avoid a deed in a court of law. With respect to this being in restraint of trade, though a covenant not to set up a trade generally be bad, yet the party may covenant not to set up a trade in a

particular place ; and the covenant in this instance is similar to the latter, for it is a covenant not to use a particular machine. Even admitting this patent to be void, this is not so hard a case as that of a tenant who may be compelled to pay rent to a person having a title paramount to his landlord's, and who is nevertheless estopped to impeach his landlord's title in an action for the same rent.

Lord KENYON, C. J. The facts of this case are shortly these : the plaintiffs, pretending to derive a right under a patent, assigned to the defendant part of that right on certain terms ; and, notwithstanding the facts now disclosed show that they have no such privilege, they still insist that the defendant shall be bound by his covenant, though the consideration of it is fraudulent and void. This is not to be considered as a covenant to pay a certain sum in gross, at all events ; but to use a machine in a particular way, in consideration of the plaintiffs having conferred that interest on the defendant which they professed to confer by the agreement. Now in point of conscience, it is impossible that two persons can entertain different ideas upon the subject. But it is said that, though conscience fails, the defendant is estopped in point of law from saying that the plaintiffs had no privilege to confer. But the doctrine of estoppel is not applicable here. Where indeed an heir apparent, having only the hope of succession, conveys during the life of his ancestor an estate which afterward descends upon him, although nothing passes at that time, yet when the inheritance descends upon him he is estopped to say that he had no interest at the time of the grant. There an estoppel is founded on law, conscience, and justice ; but what is the case here ? Who is estopped ? The person supposed to be estopped is the very person who has been cheated and imposed upon. In the case of *Oldham v. Langmead*, the patentee had conveyed his interest in the patent to the plaintiff ; and yet, in violation of his contract, he afterward infringed the plaintiff's right, and then attempted to deny his having had any title to convey. But I was of opinion that he was estopped by his own deed

from making that defence. But there is no similarity between that and the present case. Neither does this resemble the case of landlord and tenant; for the tenant is not at all events estopped to deny the landlord's title; the estoppel only exists during the continuance of his occupation; and if he be ousted by a title paramount, he may plead it.

ASHURST, J. This is a good plea; and the defendant is not estopped from disclosing any of the matters contained in it. This is not like the case of landlord and tenant; as long as the tenant enjoys the estate, he shall not be permitted to deny his landlord's title, for he has a meritorious consideration; but when he is expelled by a person having a superior title, he may plead it. But this is a case of a very different kind. The plaintiffs use this patent as a fraud on all mankind; and they state it to be an invention of the patentee, when in truth it was no invention of his. The only right conferred on the defendant by this agreement was that of using this machine, which was no more than that which he, in common with every other subject, has without any grant from the plaintiffs.

BULLER, J. In the construction of all covenants and agreements, the court has universally considered the intention of the parties. Now here the plaintiffs asserted that they had an exclusive right to a particular machine; and if they had, they might convey it to any other person. They then came to an agreement with the defendant, by which they covenanted that he should be at liberty to use the patent machine, of which they were then in possession, provided he would use it in the manner therein specified; in consideration of which, he covenanted not to use any other machine. But it is now discovered that they had no such right, and therefore the defendant has not the consideration for which he entered into this covenant; and notwithstanding which, they insist that he is still bound. I think that the case of landlord and tenant is not unlike this; for the facts in this case, disclosed by the pleas, are equivalent to an eviction of the tenant. As long as the tenant holds under the lease, he is estopped from denying

his landlord's title ; but when he is evicted, he has a right to show that he does not enjoy that which was the consideration for his covenant to pay the rent, notwithstanding he has bound himself by the covenant.

GROSE, J., declared himself of the same opinion.

Judgment for defendant.

DILLY v. DOIG.

Chancery, Nov. 20, 1794.

Bill for Injunction. Parties.

The proprietor of a copyright must file separate bills against each bookseller who has taken copies of a spurious edition for sale. There must be separate bills upon distinct invasions of a patent ; otherwise, of fishery or the custom of a mill.

Motion to amend bill for an injunction to restrain violation of copyright.

The plaintiff was proprietor of an improved edition of Entick's Dictionary, and had obtained an injunction to restrain the defendant from selling a spurious edition printed at Edinburgh.

Thompson moved, upon notice, for leave to amend the bill by making another bookseller, who had procured several copies of the spurious edition from Edinburgh with a view to sale, a party without prejudice to the injunction. He said the bill only sought to establish one general right, and cited *Mayor of York v. Pilkington* (1 Atk. 282).

Lord Chancellor LOUGHBOROUGH. The mode proposed would be more inconvenient than separate bills. The right against the different booksellers is not joint, but perfectly distinct ; there is no privity. If the defendant against whom you had got the injunction had transferred his books to another, I would have followed it. In the case cited the bill was to prevent multiplicity of suits. One general right was liable to invasion by all the world ; so a bill to establish

the custom of a mill. They stand upon a distinct ground. I do not remember any case upon patent rights in which a number of people have been brought before the court as parties acting all separately upon distinct grounds; the suit has always been against a particular defendant. In a case here not long ago upon Boulton and Watt's patent, there were several bills.

The motion was refused.

BOULTON v. BULL.

Common Pleas, May 16, 1795.

Patenting a "Method." Sufficiency of Specification.

A patent was granted for a method of lessening the consumption of steam and fuel in fire-engines. The invention consisted in condensing in a separate vessel in place of condensing in the working cylinder; also in clothing the working cylinder so as to keep it hot; also in the use of an air-pump for removing uncondensable vapors; and there were some other minor points. The trial of an action on the case for infringement resulted in a verdict subject to the opinion of the court; upon which there was a wide and learned discussion of the patentability of such inventions, and of the meaning of such terms as "machine," "manufacture," "method," "principle," etc., as used in patent law; but as the judges were divided in opinion, no judgment was rendered.

Case stated after verdict for plaintiff in action for infringement.

The patent was granted to James Watt for "a method of lessening the consumption of steam and fuel in fire-engines," the term of which plaintiff claimed to have been extended by the act of Parliament mentioned below.

The specification was as follows: "My method of lessening the consumption of steam, and consequently fuel, in fire-engines, consists of the following principles: 1. That vessel in which the powers of steam are to be employed, to work the engine which is called the cylinder in common fire-engines, and which I call the steam-vessel, must, during the whole time the engine is at work, be kept as hot as the

steam that enters it ; first, by inclosing it in a case of wood, or any other materials that transmit heat slowly ; secondly, by surrounding it with steam, or other heated bodies ; and, thirdly, by suffering neither water nor any other substance colder than the steam to enter or touch it during that time.

2. In engines that are to be worked wholly or partially by condensation of steam, the steam is to be condensed in vessels distinct from the steam-vessels or cylinders, although occasionally communicating with them ; these vessels I call condensers ; and while the engines are working, these condensers ought at least to be kept as cold as the air in the neighborhood of the engines, by application of water, or other cold bodies.

3. Whatever air or other elastic vapor is not condensed by the cold of the condenser, and may impede the working of the engine, is to be drawn out of the steam vessels or condensers by means of pumps, wrought by the engines themselves, or otherwise.

4. I intend, in many cases, to employ the expansive force of steam to press on the pistons, or whatever may be used instead of them, in the same manner as the pressure of the atmosphere is now employed in common fire-engines ; in cases where cold water cannot be had in plenty, the engines may be wrought by this force of steam only, by discharging the steam into the open air after it has done its office.

5. Where motions round an axis are required, I make the steam-vessels in form of hollow rings, or circular channels, with proper inlets and outlets for the steam, mounted on horizontal axles, like the wheels of a water-mill ; within them are placed a number of valves, that suffer any body to go round the channel in one direction only ; in these steam-vessels are placed weights, so fitted to them as entirely to fill up a part or portion of their channels, yet rendered capable of moving freely in them, by the means hereinafter mentioned or specified. When the steam is admitted in these engines, between these weights and the valves, it acts equally on both, so as to raise the weight on one side of the wheel, and, by the reaction on the valves successively, to give a circular motion to the wheel, the valves opening in the direction in which the weights are pressed, but not in the

contrary ; as the steam-vessel moves round, it is supplied with steam from the boiler, and that which has performed its office may either be discharged by means of condensers, or into the open air. 6. I intend, in some cases, to apply a degree of cold, not capable of reducing the steam to water, but of contracting it considerably, so that the engines shall be worked by the alternate expansion and contraction of the steam. Lastly, instead of using water to render the piston or other parts of the engine air and steam tight, I employ oils, wax, resinous bodies, fat of animals, quicksilver, and other metals, in their fluid state."

The additional facts appear in the opinions of the court.

The questions submitted were, 1. Whether the patent was good in law, and continued by the act of Parliament. 2. Whether the specification was sufficient to support the patent.

Adair, for the plaintiff, contended that the patent was good at law, being for a newly discovered method of producing an important effect in the use of the old steam-engine. The counsel argued that the words of the statute 21 Jac. I., c. 3, sec. 6, "working or making any manner of new manufactures," must include plaintiff's invention. The term manufacture means anything made or produced by art, and the method or invention for which the patent is granted is to produce an effect by artificial means, by which the consumption of fuel shall be lessened in steam-engines. Whether the word method be used as in the patent, or engine as in the act for continuing it, the meaning is the same, and the court will not deprive the plaintiffs, the merit and utility of whose invention is admitted on all sides, of the benefit of that invention by mere verbal criticism. [HEATH, J. When a mode of doing a thing is referred to something permanent, it is properly termed an engine ; when to something fugitive, a method.] This patent is not expressed in terms new or unusual ; almost all the patents upon record, that have been granted to those who have made discoveries or improvements in the mechanical arts, being for the method of doing the thing, and not for the thing done. [HEATH, J. Is there any instance of a patent for a

mere method?] The patent granted to Dollond for his improvement in making the object-glasses of telescopes, was for "an invention of a new method of making the object-glasses of refracting telescopes." So also Hartley's patent was for his method of securing buildings from fire. So likewise are the numerous patents that have been granted for the different improvements which have been made of late years in chemistry and medicine (many patents of this kind were cited). The patent therefore of the plaintiffs is good in law, and is continued by the act 15 Geo. III. That act expressly recites the patent, and extends the benefit of it for twenty-five years to Watt and his assigns. It was therefore clearly the intention of the legislature that the patent already granted should be continued, and the court will construe the act in such a manner as to effectuate that intention.

With regard to the specification, that is sufficiently explicit to support the validity of the patent. The improvement made by Watt consists in a discovery that by letting out the steam from the cylinder into another vessel, in order to condense it, instead of admitting cold water into the cylinder for that purpose, as was done in Newcomen's engine, and by keeping the cylinder hot, the consumption of steam, and consequently of fuel, would be diminished. The communication between the cylinder and the other vessel is formed by means of valves, which were before in use in Newcomen's engine, and therefore not necessary to be more accurately described, and the mode of keeping the cylinder hot is explicitly stated in the specification. There is no new mechanical construction invented by Watt, capable of being the subject of a distinct specification; but his discovery was of a principle, the method of applying which is clearly set forth, and therefore a drawing would have been unnecessary. So in Dollond's patent; the specification describes the principle, but not the mechanical construction by which it is carried into effect. It recites that a patent had been granted to him, for "the invention of a new method of making the object-glasses of refracting telescopes, by compounding mediums of different refractive

qualities, whereby the errors arising from the different refrangibility of light, as well as those which are produced by the spherical surfaces of the glasses, were perfectly corrected." It then goes on to state, after mentioning the defects of the telescopes then in use, that in the new telescopes the images of objects were formed by the difference between two contrary refractions, the object-glass being a compound of two or more glasses put close together, whereof one was concave and the other convex; that the excess of refraction by which the image was formed was in the convex glass, which was made of a medium or substance in which the difference of refrangibility was not so great as in the substance of which the concave glass was formed; therefore, their refractions being proportioned to their difference of refrangibility, there remained a difference of refraction by which the image was formed, without any difference of refrangibility to disturb the vision; and that the radii of the surfaces of each of those glasses were likewise so proportioned as to make the aberrations which proceeded from their spherical surfaces respectively equal, which being also contrary, destroyed each other. But there is no mention of any mechanism, nor does the specification state the degrees of sphericity or curvature of the concave or convex glasses; because it is well known that the curvature of the one must be proportioned to that of the other, in order to correct the refrangibility of the rays of light. It is also to be observed that the jury have found that the specification is sufficient to enable a mechanic acquainted with the fire-engines previously in use to construct fire-engines producing the effect of lessening the consumption of fuel and steam, upon the principle invented by the plaintiff Watt. It is therefore upon the whole submitted to the court that both the questions stated in the case must be answered in the affirmative. [BULLER, J. The objection to Dollond's patent was that he was not the inventor of the new method of making object-glasses, but that Dr. Hall had made the same discovery before him. But it was holden that as Dr. Hall had confined it to his closet, and the public were not acquainted with it, Dollond was to be considered as the inventor.]

Williams, for defendant, urged that the patent was void, because it differed from the specification; the patent being for a formed instrument or machine, but the specification for principles unorganized. It is for a new invented method. Now the word invention, when applied to mechanical subjects, properly signifies something which has been already formed, some manufacture or machine, and is not applicable to mere unorganized principles. The plaintiff Watt cannot be said to have invented the principles, for those principles were in use in Newcomen's steam-engine. It is true that the application of those principles in the manner described in the specification is new; but it was well known long before that steam had an expansive power, and was condensed by cold. It is in this sense that the word invention is used in the patent. It recites that Watt "had, after much labor and expense, invented a method of lessening the consumption of steam and fuel in fire-engines." From these words it seems clear that he meant it to be understood that the invention which he represented himself to have made was completely formed, and not that he had merely conceived in his mind the application of certain known principles, by which the consumption of steam and fuel would be lessened in fire-engines; for the ideas of the principles before they were organized could not have been attended with great labor, and much less with great expense. That the representation was understood in this sense will appear from considering other parts of the patent. The king grants to Watt that he shall "make, use, exercise and vend his said invention."

In another part of the patent, all persons are forbidden to counterfeit, imitate or resemble the said invention, and to make or cause to be made any addition thereto or subtraction therefrom. In another part, it is provided that the patent shall not extend to give Watt a privilege to use or exercise any invention or work whatsoever which had theretofore been found out or invented by any other, and publicly used or exercised; but that every other person should use and practise their several inventions. Now it is impossible that any of the expressions thus cited from the patent

can be applied to the invention of mere unorganized principles of science. If then the patent be, which it clearly is, for a formed instrument or machine, it is void ; because it is admitted that there is no specification descriptive of any formed instrument whatever, nor is there any drawing or model.

But supposing it to be a patent for mere principles (for the specification states that the invention consists of principles), it is neither originally good in law nor continued by the act of 15 Geo. III. It is not good in law, because it does not fall within the construction of the statute 21 Jac. I., c. 3, upon which alone it must, if at all, be supported. The sixth section of that act provides that nothing therein contained shall extend to any letters patent, or grants of privilege for fourteen years or under, thereafter to be made, of the sole working or making of any manner of new manufactures, which others at the time shall not use. The word manufacture is descriptive either of the practice of making a thing by art or of the thing when made. The invention, therefore, of any instrument, used in the process of making a thing by art is a manufacture, and the subject of a patent within the statute, because such an instrument is itself a thing made by art. So, also, medicines may be said to be a species of manufacture, and within the provision of the statute, because they consist in the practice of mixing together and making up by art the different ingredients of which they are composed, and are the result of principles organized, as far as the nature of the thing will admit. The same observation may be made with respect to Dollond's telescopes, which are certainly a manufacture, and within the statute 21 Jac. I.; but they consist of principles reduced into form and practice, as much as the subject will admit, and the patent is for glasses completely formed, not for mere principles ; and the specification describes the manner in which the invention is to be carried into execution, with all the perspicuity of which the thing is capable. That this is the true meaning of the term manufacture, as it is used by the legislature, likewise appears from the words "making or working" being applied to it, and "which others at the time shall not use," and also from the provision that

the patentee shall ascertain the nature of his invention, and in what manner the same is to be performed. The specification is the price which the patentee is to pay for the monopoly. In the construction of specifications, it is a rule that the patentee must describe his invention in such a manner that other artists in the same trade or business may be taught to do the same thing for which the patent is granted, by following the directions of the specification alone, without any new invention or addition of their own, and without the expense of trying experiments. (Turner v. Winter, *ante*, p. 43.) This necessarily excludes any supposition that mere principles can be the subject of a patent. That this is the true construction of the word manufactures in the statute appears also from Lord Coke's commentary on it, 3 Inst. 184; who, as appears from the journal of the House of Commons, was chairman of the committee to whom the bill was referred, and who, therefore, probably either drew or perused it. This construction of the word manufactures in the statute is also fortified by the opinion of Yates, J., in the controversy respecting literary property (Miller v. Taylor, 4 Burr. 2361), who there held in illustration of the subject before him that mere principles, not embodied and reduced into practice, were not the subject of a patent. Until they are so embodied, they are like the sentiments of an author while in his own mind. In that state, they are alike the property of him or of another. But when once they are published, then, and not before, his exclusive property in them, or in the organization of them, commences. In Sir Richard Arkwright's case (*ante*, p. 29), too, Buller, J., stated in his summing up that, for a principle alone, a patent could not be obtained. And, independent of authorities, the reason of the thing shows that such a patent could not be obtained within the meaning of the statute. By obtaining a patent for principles only, instead of one for the result of the application of them, the public is prevented, during the term, from improving on those principles; and, at the end of the term, is left in a state of ignorance as to the best, cheapest and most beneficial manner of applying them to the end proposed.

It is true, indeed, that the jury have found that the specification made by Watt is of itself sufficient to enable a mechanic acquainted with fire-engines previously in use to construct fire-engines, producing the effect of lessening the consumption of fuel and steam in fire-engines, upon the principle invented by Watt. But it is not found that the specification would enable a mechanic to construct Watt's fire-engines; nor is it found to what extent the consumption of steam and fuel would be lessened in fire-engines, constructed upon the principles stated in the specification; nor whether those engines would have the effect of lessening the consumption of steam to the same degree with Watt's engines. All this is left uncertain. The merit of the invention must be measured by the quantity of fuel which may be saved by it. Now, it is possible that, agreeable to this finding, a fire-engine might be made which would produce the effect of lessening the consumption of fuel and steam, upon the principles mentioned in the specification; but yet such engine might save only one bushel of coals, or other fuel, where Watt's engine would save one hundred. The finding of the jury, therefore, does not mend the case. The specification ought to have described the method by which the machine might be made to save the greatest quantity of fuel which it was known to be capable of saving, and which in fact it does save, when used by the inventor. It is a settled rule of law that if a patentee makes the thing for which the patent is granted with cheaper materials, or if he applies and uses it in a more advantageous and useful manner than is described in the specification, the patent is void; because he does not put the public in possession of his invention, or enable them to derive the same benefit that he himself derives from it. (*Turner v. Winter, ante*, p. 43.)

It is to be shown, in the next place, that the patent is not continued by the act 15 Geo. III., c. 61. The title of it is, "An act for vesting in James Watt the sole property of certain steam-engines, called fire-engines, of his invention." It recites that the king, by his letters patent, had given and granted to Watt the sole benefit and advantage of making and vending certain engines, by him invented, for lessening

the consumption of steam and fuel in fire-engines, with a proviso that he should cause a particular description of the nature of the said invention to be enrolled, and that he accordingly had caused a particular description of the nature of the said engine to be enrolled. It further recites that the said James Watt had employed many years and a considerable part of his fortune in making experiments upon steam-engines, commonly called fire-engines ; but, on account of the many difficulties which always arise in the execution of such large and complex machines, he could not complete his intention before the end of the year 1794, when he finished some large engines as specimens of his construction, and that his engines might be of great utility ; and then enacts that the sole privilege of making, constructing and selling the engines thereinbefore particularly described shall be vested in Watt for twenty-five years, and that he, during the said term, shall make, exercise and vend the said engines. Now, is it possible to say that this act continues a patent for mere principles ? Certainly not. If, therefore, the patent be really for principles, it is not continued by the act ; but supposing that, though the act does not describe the patent according to the terms of it, yet it does describe it according to its import, namely, as a patent for principles ; in that case it would not be within the protection of the statute of 21 Jac. I., c. 3, for the reasons already offered.

There is a proviso in the act 15 Geo. III. that every objection in law, competent against the said patent, should be competent against the act, to all intents and purposes, except so far as relates to the term thereby granted. Though this, therefore, is a grant of a monopoly by the legislature, yet it is to receive precisely the same construction as if it had been a grant by letters patent. Now, the grant itself is void, being founded on a false suggestion of the party to whom it is made, for it is a rule of law that if the king's grant be founded on a false suggestion of the party to whom it is made, it is void ; as if anything mentioned in the consideration of the grant be false. The consideration, which is the foundation of this grant in the act, is the recital that

the king had, in January, 1765, by his letters patent, granted to Watt, for the term of fourteen years, the sole benefit and advantage of making and vending certain engines by him invented for lessening the consumption of steam and fuel, and that, owing to the reasons which are mentioned in the recital, it was probable that the whole term granted by the patent would elapse before he could receive any compensation adequate to his labor ; for which reasons the term granted by the patent is prolonged, and the act vests in him the sole privilege of making, constructing and selling the said engines for twenty-five years ; that is, the engines, the sole making and vending of which the king had granted by his said letters patent. But it is admitted that the king did not grant by the patent a monopoly for making and vending any engines whatever.

The recital, therefore, which is the very foundation of the grant, is untrue. It has been also adjudged that if a private act of Parliament, like the present, be founded upon a false recital, the act is void. (Earl of Leicester v. Heydon, Plowd. 390.) There it is laid down that statutes which misrecite things to which they refer are void ; and that, in the principal case, the statute which recited that A was attainted, when in fact he was not attainted, was void. Another objection to this act, 15 Geo. III., is that it professes to vest in Watt the exclusive property in an entire machine, notwithstanding the invention, which he claims to be his, is admitted of an improvement only of a known machine. And upon this point it is to be observed that Lord Coke says (3 Inst. 184), "Such a privilege as is consonant to law must be substantially and essentially newly invented ; but if the substance was *in esse* before, and a new addition thereunto, though that addition make the former more profitable, yet it is not a new manufacture in law." The act is also defective in not setting forth any specification of a formed instrument or machine ; it is, indeed, admitted that no such specification is to be found.

If the subject be viewed as arising from the patent and act taken together, the arguments which have been already used, respecting those instruments separately, apply them-

selves more strongly, inasmuch as if the act be considered as explanatory of the patent, or as a part of it, there cannot be a doubt but that it means to grant a monopoly for a formed engine or machine. Upon the whole, therefore, of the case it appears, either that the patent is for an entire formed machine, when it ought to have been for an improvement only, and in which case the specification does not correspond with it ; or it is for mere principles, which, according to the statute 21 Jac. I., c. 3, cannot be the subject of a patent.

In reply, *Adair* contended that the patent was neither for a formed instrument nor the specification for a principle unorganized. The former was for "a new invented method of lessening the consumption of steam and fuel in fire-engines," by whatever mode that effect may be produced ; the latter states both the principle of the invention, and also the mode in which it is to operate ; namely, the preserving the cylinder hot by the means described, and the condensing the steam in separate vessels communicating with the cylinder. The difference in the terms used in the patent and the specification arises from the nature of the subject ; but the real meaning of them is the same. Where an improvement is made upon a machine already known, the patent ought not to be for the machine itself, but for the method of improving it. Thus, a patent was granted in 1759 to one Wood for "a scheme to work a fire-engine at half the expense of coals," an effect which must have been caused by an alteration of the engine ; yet the patent was for the scheme or method, and not for the engine itself. And, in the case of an improvement for making watches, Jessop's patent was avoided, because it was for the whole watch, when the invention consisted of only one movement. But, notwithstanding this rule, if, from the nature of the thing, a patent for the new method or improvement only should have the effect of giving a right to the whole machine, that is not of itself a ground on which the patent can be set aside.

ROOKE, J. From the case, and from the admission of counsel on both sides, I assume the following facts, namely,

that the plaintiff Watt is the inventor of a new and useful improvement in fire-engines, whereby the consumption of steam, and consequently of fuel, is considerably lessened ; that the improvement is of such a nature that it may legally be the object of protection by royal patent ; that a patent has been granted to the inventor, on the condition of a specification of the nature of the invention ; that a specification has been made, sufficient to enable a mechanic to construct fire-engines containing the improvement invented by the patentee ; and that the legislature, six years after the patent had been granted, thought proper to extend the duration of it from the eight years then to come, to twenty-five years ; the patent having been granted in the ninth and the statute having passed in the fifteenth year of the reign of the present king.

Under these circumstances, I think I conform to the spirit of the statute 21 Jac. I., c. 3, sec. 6, if I incline to support this patent, provided it may be supported without violating any rule of law ; and I think so for two reasons : first, because the patentee is substantially entitled to the protection of the patent ; and secondly, because the public are sufficiently instructed, and will be duly benefited by the specification. Against the claim of the patentee certain objections have been made, which, it is contended, deprive him of all legal right to that protection. First, it is objected that the patent is not for fire-engines upon the particular construction which contains this new improvement, but for a new invented method of lessening the consumption of steam and fuel ; secondly, it is objected that no particular engine is described in this specification, but that it only sets forth the principles ; and the last objection is that the statute has not duly prolonged the patent, because the patent is for a method, and the statute for an engine. It is obvious that these objections are merely formal ; they do not affect the substantial merits of the patentee, nor the meritorious consideration which the public have a right to receive, in return for the protection which the patentee claims. With regard to the first objection, it is that the patent is not for a fire-engine of a particular construction,

but for a new invented method. It presupposes the existence of the fire-engine, and gives a monopoly to the patentee of his new invented method of lessening the consumption of steam and fuel in fire-engines. The obvious meaning of these words is that he has made an improvement in the construction of fire-engines ; for what does method mean but mode or manner of effecting ? What method can there be of saving steam or fuel in engines but by some variation in the construction of them ? A new invented method, therefore, conveys to my understanding the idea of a new mode of construction. I think those words are tantamount to fire-engines of a newly invented construction ; at least I think they will bear this meaning, if they do not necessarily exclude every other. The specification shows that this was the meaning of the words, as understood by the patentee ; for he has specified a new and particular mode of constructing fire-engines. If he has so understood the words, and they will bear this interpretation, then I think this objection, which is merely verbal, is answered. To which I add that patents for a method or art of doing particular things have been so numerous, according to the lists left with us, that method may be considered as a common expression in instruments of this kind. It would, therefore, be extremely injurious to the interest of patentees to allow this verbal objection to prevail. As to the second objection, that no particular engine is described, that no model or drawing is set forth, I hold this not to be necessary, provided the patentee so describes the improvement as to enable artists to adopt it when his monopoly expires. The jury find that he has so described it. It is objected that he professes to set forth principles only ; but we are not bound by what he professes to do, but by what he has really done. If he had professed to set forth a full specification of his improvement, and had not set it forth intelligibly, his specification would have been insufficient and his patent void. It seems, therefore, but reasonable that if he sets forth his improvement intelligibly, his specification should be supported, though he professes only to set forth the principle. The term principle is equivocal ; it may denote either the

radical elementary truths of a science, or those consequential axioms which are founded on radical truths, but which are used as fundamental truths by those who do not find it expedient to have recourse to first principles. The radical principles on which all steam-engines are founded are, the natural properties of steam, its expansiveness and condensibility. Whether the machines are formed in one shape or another ; whether the cylinder is kept hot or suffered to cool ; whether the steam is condensed in one vessel or another, still the radical principles are the same. When the present patentee set his inventive faculties to work, he found fire-engines already in existence, and the natural qualities of steam already known and mechanically used. He only invented an improvement in the mechanism, by which they might be employed to greater advantage. There is no newly discovered natural principle as to steam, nor any new mechanical principle in his machine ; the only invention is a new mechanical employment of principles already known. As to the specification, some part of it, so much as represents the future intentions of the patentee, may be considered, according to the language of the specification, as merely theoretical ; but the greater part describes a practical use of improved mechanism, the basis on which the improvement is founded. The object of the patentee was to condense the steam without cooling the cylinder ; the means adopted to effectuate this were to enclose the cylinder in a case which will confine the heat or transmit it slowly, to surround it with steam or other heated bodies, and to suffer neither water nor any other substance colder than the steam to enter or touch it during that time. These means are set forth. The objection is that there is no drawing or model of a particular engine ; and where is the necessity of such drawing or model, if the specification is intelligible without it ? Had a drawing or model been made, and any man copied the improvement, and made a machine in a different form, no doubt this would have been an infringement of the patent. Why ? Because the mechanical improvement would have been introduced into the machine, though the form was varied. It follows from

thence that the mechanical improvement, and not the form of the machine, is the object of the patent ; and if this mechanical improvement is intelligibly specified, of which a jury must be the judges, whether the patentee calls it a principle, invention, or method, or by whatever other appellation, we are not bound to consider his terms, but the real nature of his improvement, and the description he has given of it ; and we may, I think, protect him, without violating any rule of law. As to the articles of the specification which denote intention only, and do not state the thing to which it is to be applied, I do not think he could maintain an action for breach of these articles ; for he cannot anticipate the protection before he is entitled to it by practical accomplishment. But the patent is for a method already adopted, and the two first and most material articles are set forth as already accomplished, and the case states it was new and useful, at the time of making the patent. I therefore consider the most essential part of the patent, the keeping the cylinder hot, enclosing it in a case, and surrounding it with steam, as carried into practical effect at the time of granting the patent ; this the defendant has infringed, and I will presume, after a verdict where nominal damages only are given, that the evidence was applied to and the damages given for those articles only which are well specified. Now, if he has infringed those articles which are well specified, he shall not be excused from an action ; because he has been guilty of an additional infringement on that which is specified as matter of intention only. As to the objection of the want of a drawing or model, that at first struck me as of great weight. I thought it would be difficult to ascertain what was an infringement of a method, if there was no additional representation of the improvement or thing methodized. But I have satisfied my mind thus ; infringement or not, is a question for the jury ; in order to decide this case, they must understand the nature of the improvement or thing infringed ; if they can understand it without a model, I am not aware of any rule of law which requires a model or a drawing to be set forth, or which makes void an intelligible specification of a me-

chanical improvement, merely because no drawing or model is annexed. In the present case, I do not hear that the want of a drawing or a model occasioned any difficulty to the jury; they have expressly decided that Mr. Watt has the merit of a new and useful invention, and that this invention was infringed by the defendant. How then can I say that they could not understand it for the want of a drawing? Especially when they have added that the specification is sufficient to enable a mechanic, acquainted with the fire-engines previously in use, to construct fire-engines producing the effect of lessening the consumption of fuel and steam, upon the principle invented by the plaintiffs. For these reasons, I think the second objection, that no particular engine is set forth, is not of sufficient weight to destroy the effect of the patent.

HEATH, J. This patent is expressly for a new invented method for lessening the consumption of steam and fuel in fire-engines. It appears that the invention of the patentee is original, and may be the subject of a patent; but the question is, inasmuch as this invention is to be put in practice by means of machinery, whether the patent ought not to have been for one or more machines, and whether this is such a specification as entitles him to the monopoly of a method? If method and machinery have been used by the patentee as convertible terms, and the same consequences would result from both, it might be too strong to say that the inventor should lose the benefit of his patent by the misapplication of the term. In truth it is not so. His counsel have contended for the exclusive monopoly of a method of lessening the consumption of steam and fuel in fire-engines, and that therefore would better answer the purposes of the patentee, for the method is a principle reduced to practice; it is in the present instance the general application of a principle to an old machine. There is no doubt that the patentee might have a patent for his machinery, because the act of Parliament he obtained acknowledged his patent, and he himself, in 1782, procured a patent for his invention of certain new improvements upon steam and fire-engines, for raising water, etc., which contained

new pieces of mechanism applicable to the same. Upon this statement the following objections arise to the patent, which I cannot answer : viz., that if there may be two different species of patents, the one for an application of a principle to an old machine, and the other for a specific machine, one must be good and the other bad. The patent that admits the most lax interpretation should be bad, and the other alone conformable to the rules and principles of common law and to the statute on which patents are founded. The statute of 21 Jac. I., c. 3, prohibits all monopolies, reserving to the king, by an express proviso, so much of his ancient prerogative as shall enable him to grant letters patent and grants of privilege for the term of fourteen years or under, of the sole working or making of any manner of new manufactures within this realm, to the true and first inventor and inventors of such manufactures. What, then, falls within the scope of the proviso ? Such manufactures as are reducible to two classes. The first class includes machinery, the second substances (such as medicines) formed by chemical and other processes, where the vendible substance is the thing produced, and that which operates preserves no permanent form. In the first class the machine, and in the second the substance produced, is the subject of the patent. I approve of the term manufacture in the statute, because it precludes all nice refinements, it gives us to understand the reason of the proviso, that it was introduced for the benefit of trade. That which is the subject of a patent ought to be specified, and it ought to be that which is vendible, otherwise it cannot be a manufacture. This is a species of new manufacture, and the novelty of the language is sufficient to excite alarm. It has been urged that other patents have been litigated and established ; for instance, Dollond's, which was for a refracting telescope. I consider that as substantially an improved machine. A patent for an improvement of a refracting telescope, and a patent for an improved refracting telescope, are in substance the same. The same specification would serve for both patents ; the new organization of parts is the same in both. I asked in the argument for an instance of

a patent for a method, and none such could be produced. I was then pressed with patents for chemical processes, many of which are for a method, but that is from an inaccuracy of expression, because the patent in truth is for a vendible substance. To pursue this train of reasoning still further, I shall consider how far the arguments in support of this patent will apply to the invention of original machinery, founded on a new principle. The steam-engine furnishes an instance. The Marquis of Worcester discovered in the last century the expansive force of steam, and first applied it to machinery. As the original inventor, he was clearly entitled to a patent. Would the patent have been good applied to all machinery, or to the machines which he had discovered? The patent decides the question. It must be for the vendible matter, and not the principle. Another objection may be urged against the patent, upon the application of the principle to an old machine, which is, that whatever machinery may be hereafter invented would be an infringement of the patent if it be founded on the same principle. If this were so, it would reverse the clearest positions of law respecting patents for machinery, by which it has always been holden that the organization of a machine may be the subject of a patent, but principles cannot. If the argument for the patentee were correct, it would follow that where a patent was obtained for the principle, the organization would be of no consequence. Therefore, the patent for the application of the principle must be as bad as the patent for the principle itself. It has been urged for the patentee that he could not specify all the cases to which his machinery could be applied. The answer seems obvious, that what he cannot specify he has not invented. The finding of the jury that steam-engines may be made upon the principle stated by the patentee, by a mechanic acquainted with the fire-engines previously in use, is not conclusive. This patent extends to all machinery that may be made on this principle, so that he has taken a patent for more than he has specified; and as the subject of his patent is an entire thing, the want of a full specification is a breach of the conditions, and avoids the patent. Indeed, it seems impos-

sible to specify a principle and its application to all cases, which furnishes an argument that it cannot be the subject of a patent. It has been usual to examine the specification, as a condition on which the patent was granted. I shall now consider it in another point of view. It is a clear principle of law that the subject of every grant must be certain. The usual mode has been for the patentee to describe the subject of it by a specification. The patent and the specification must contain a full description ; then in this, as in most other cases, the patent would be void for the uncertain description of the thing granted, if it were not aided by the statute. The grant of a method is not good, because uncertain ; the specification of a method, or the application of a principle, is equally so, for the reasons I have alleged.

BULLER, J. Few men possess more ingenuity, or have greater merit with the public, than the plaintiffs on this record ; and if their patent can be sustained in point of law, no man ought to envy them the profits and advantages arising from it. Even if it cannot be supported, no man ought to envy them the profits which they have received, because the world has undoubtedly derived great advantages from their ingenuity. We are called upon to deliver our opinions on the dry question of law, whether, upon the case disclosed to us, this patent can or cannot be sustained. I shall deliver my opinion first, upon the case itself, and secondly, on the arguments which have been urged at the bar.

The case states the plaintiffs' patent, the specification, and the act of Parliament. It gives a description of the old engine, and then states that the invention of the plaintiffs is a new and useful one ; and that the specification is sufficient to enable a mechanic to construct fire-engines, producing the effect of lessening the consumption of fuel and steam in fire-engines, upon the principle invented by Mr. Watt. One objection made by the defendant was that it did not appear on the case that a mechanic could, from the specification, construct an engine which should lessen the consumption of fuel and steam with equal effect, or to the

same extent, as Mr. Watt himself did. If the negative appeared, namely, that a mechanic could not from the specification make an engine with equal effect, or if it required expense and experiments before it could be done, I agree that either of these facts would avoid the patent ; but that is not so stated, and upon this case, I think we are bound to say there is no foundation for either of these objections. There is another objection to the case, which I think more important, and that is that the jury have not told us wherein the invention consists ; whether it be in an additional cylinder or other vessel to the old machine, or what the addition is, or whether it be only in the application of the old parts of the machine, or in what is called at the bar the principle only, or in what that principle consists. These defects have opened a great field of argument, and have driven the plaintiffs' counsel to the necessity of endeavoring to support his case on all possible grounds. The old engine consisted of a cylinder, a boiler, a pipe, which occasionally communicated between them, an injection cistern, and pumps. The two material parts of the new engine, as mentioned in the specification, are, the old cylinder, now called the steam-vessel, and the vessel, now called the condenser ; which, it is said, must be distinct from the steam-vessel, though occasionally communicating with it. The old boiler did occasionally communicate with the cylinder. The pumps, grease, and other things are admitted to be trifling circumstances, and not worthy any observation. Upon this state of the case, I cannot say that there is anything substantially new in the manufacture ; and, indeed, it was expressly admitted on the argument that there were no new particulars in the mechanism ; that it was not a machine or instrument which the plaintiffs had invented ; that mechanism was not pretended to be invented in any of its parts ; that this engine does consist of all the same parts as the old engine ; and that the particular mechanism is not necessary to be considered. The fact of there being nothing new in the engine drove the counsel to argue on very wide grounds, and to touch on the possibility of maintaining a patent for an idea or a principle, though I think it was

admitted that a patent could not be sustained for an idea or a principle alone.

The very statement of what a principle is proves it not to be a ground for a patent ; it is the first ground and rule for arts and sciences, or, in other words, the elements and rudiments of them. A patent must be for some new production from those elements, and not for the elements themselves. The plaintiffs' case is considerably distressed in many parts of it, and as it seems to me, the arguments which have been adduced were very much calculated to keep clear of difficulties which the counsel foresaw might be introduced into the case ; as first, that unless the principle can be supported as the ground of the patent, there may be some danger in confirming the defendant's objection to it ; secondly, that unless the principle can be supported it may open a fatal objection to the specification, because that does not state in what manner the new machine is to be constructed, how it varies from the old one, or in what way the improvements are to be added ; or, thirdly, because the patent embraces the whole principle and is founded on that alone, but the invention is taken to consist of an improvement or addition only. Another objection may arise both to the patent and specification, viz., that the patent is granted for the whole engine, and not for the addition and improvement only. Perhaps it may be convenient and judicious to keep these objections as much as possible in the background and out of the view of the court. But it is our duty to sift and dive into the facts and circumstances of the case, and the bearings and consequences of them, as far as our abilities or knowledge of the subject will admit. There is one short observation arising on this part of the case, which seems to me to be unanswerable, and that is that if the principle alone be the foundation of the patent, it cannot possibly stand, with that knowledge and discovery which the world were in possession of before. The effect, the power, and the operation of steam were known long before the date of this patent ; all machines which are worked by steam are worked by the same principle. The principle was known before, and therefore if the principle alone be the founda-

tion of the patent, though the addition may be a great improvement, as it certainly is, yet the patent must be void *ab initio*. But then it was said that though an idea or principle alone would not support the patent, yet that an idea reduced into practice, or a practical application of a principle, was a good foundation for a patent, and was the present case. The method and the mode of doing a thing are the same, and I think it impossible to support a patent for a method only, without having carried it into effect, and produced some new substance. But here it is necessary to inquire, what is meant by a principle reduced into practice? It can only mean a practice founded on principle, and that practice is the thing done or made, or, in other words, the manufacture which is invented.

This brings us to the true foundation of all patents, which must be the manufacture itself, and so says the statute, 21 Jac. I., c. 3. All monopolies, except those which are allowed by that statute, are declared to be illegal and void. They were so at common law, and the sixth section excepts only those of the sole working or making any manner of new manufacture; and whether the manufacture be with or without principle, produced by accident or by art, is immaterial. Unless this patent can be supported for the manufacture, it cannot be supported at all. I am of opinion that the patent is granted for the manufacture, and I agree with my brother Adair that verbal criticisms ought not to avail, but that "principle" in the patent, and the "engine" in the act of Parliament, mean and are the same thing. Besides, the declaration is founded on a right to the engine, and therefore unless the plaintiffs can make out their right to that extent, they must fail. In most of the instances of the different patents, mentioned by my brother Adair, the patents were for the manufacture, and the specification rightly stated the method by which the manufacture was made; but none of them go the length of proving that a method of doing a thing without the thing being done, or actually reduced into practice, is a good foundation for a patent. When the thing is done or produced, then it becomes the manufacture, which is the proper subject for a

patent. Dollond's patent was for object-glasses, and the specification properly stated the method of making those glasses. As I mentioned in the course of the argument, the point contested in that case was whether Dollond or Hall was the first and true inventor within the meaning of the statute, Hall having first made the discovery in his own closet, but never made it public ; and on that ground Dollond's patent was confirmed. Mechanical and chemical discoveries all come within the description of manufactures, and it is no objection to either of them that the articles of which they are composed were known, and were in use before, provided the compound article, which is the object of the invention, is new. But then the patent must be for the specific compound, and not for all the articles or ingredients of which it is made. The first inventor of a fire-engine could never have supported a patent for the method and principle of using iron ; nor could Dr. James (supposing his patent had been clear of other objections) have sustained a patent for the method and principle of using antimony. In the first case, the patent must have been for the fire-engine, *eo nomine* ; and in the second, for the specific compound powder. Suppose the world were better informed than it is how to prepare Dr. James's fever powder, and an ingenious physician should find out that it was a specific cure for consumption, if given in particular quantities : could he have a patent for the sole use of James's powder in consumptions, or to be given in particular quantities ? I think it must be conceded that such a patent would be void, and yet the use of the patent be new, and the effect of it would be as materially different from what it is now as life is from death. So in the case of a late discovery, which, as far as experience has hitherto gone, is said to have proved efficacious, that of the medical properties of arsenic in curing agues : could a patent be supported for the sole use of arsenic in aguish complaints ? The medicine is the manufacture, and the only object of a patent ; and as the medicine is not new, any patent for it, or for the use of it, would be void. The case of water tabbies, which has often been mentioned in Westminster Hall, may afford

some illustrations of the subject. The invention first owed its rise to the accident of a man's spitting on a floor-cloth, which changed its color, from whence he reasoned on the effect of intermixing water with oil or colors, and found out how to make water tabbies, and had his patent for water tabbies only ; but if he could have had a patent for the principle of intermixing water with oil or colors, no man could have had a patent for any distinct manufacture produced on the same principle. Suppose painted floor-cloths to be produced on the same principle, yet as the floor-cloth and the tabby are distinct substances, calculated for distinct purposes, and were unknown to the world before, a patent for one would be no objection to a patent for another. The true question in this case is, whether the plaintiffs' patent can be supported for the engine. I have already said, I consider it as granted for the engine, and if that be the right construction of the patent, that alone lays all the arguments about ideas and principles out of the case. The objections to this patent as a patent for the engine are two : 1, that the fire-engine was known before ; and, 2, that, though the plaintiffs' invention consisted only of an improvement of the old machine, they have taken the patent for the whole machine, and not for the improvement alone. As to the first, the fact which the plaintiffs' counsel were forced to admit, and did repeatedly admit in the terms which I mentioned, viz., that there was nothing new in the machine, is decisive against the patent. And the second objection is equally fatal. That a patent for an addition or improvement may be maintained is a point which has never been directly decided ; and Bircot's Case, 3 Inst. 184, is an express authority against it, which case was decided in the Exchequer Chamber. What were the particular facts of that case we are not informed, and there seems to me to be more quaintness than solidity in the reason assigned, which is that it was to put a new button to an old coat, and it is much easier to add than to invent. If the button were new, I do not feel the weight of the objection that the coat on which the button was to be put was old. But, in truth, arts and sciences at that

period were at so low an ebb, in comparison with that point to which they have been since advanced, and the effect and utility of improvements so little known, that I do not think that case ought to preclude the question. In later times, whenever the point has arisen, the inclination of the court has been in favor of the patent for the improvement, and the parties have acquiesced where the objection might have been brought directly before the court. In *Morris v. Bramsom* (*ante*, p. 21), the patent was for making eyelet-holes or net-work in silk, thread, cotton or worsted ; and the defendant objected that it was not a new invention, it being only an addition to the old stocking-frame. Lord Mansfield said, after one of the former trials on this patent, "I have received a very sensible letter from one of the gentlemen who was upon the jury, on the subject, whether on principles of public policy there can be a patent for an addition only. I paid great attention to it, and mentioned it to all the judges. If the general point of law, viz., that there can be no patent for an addition, be with the defendant, that is open upon the record, and he may move in arrest of judgment. But that objection would go to repeal almost every patent that ever was granted. There was a verdict for the plaintiffs with £500 damages, and no motion was made in arrest of judgment. Though his lordship did not mention what were the opinions of the judges, or give any direct opinion himself, yet we may safely collect that he thought, on great consideration, the patent was good, and the defendant's counsel, though they had made the objection at the trial, did not afterward persist in it. Since that time it has been the generally received opinion in Westminster Hall that a patent for an addition is good ; but then it must be for the addition only, and not for the old machine too. In *Jessop's Case*, as quoted by my brother Adair (*supra*, p. 70), the patent was held to be void because it extended to the whole watch, and the invention was of a particular movement only. It was admitted in the reply that the patent should be applied to the invention itself ; but it was contended that if in consequence the patent gave a right to the whole engine, that would be no objection. To this I

answer, that if the patent be confined to the invention, it can give no right to the engine, or to anything beyond the invention itself. When a patent is taken for an improvement only, the public have a right to purchase that improvement by itself, without being encumbered with other things. A fire-engine of any considerable size, I take it, would cost about £1,200 ; and suppose the alteration made by the plaintiffs, with a fair allowance for profit, would cost £50 or £100, is it to be maintained that all the persons who already have fire-engines must be at the expense of buying new ones from the plaintiffs, or be excluded from the use of the improvement ? So in the case of the watch, may not other persons in the trade buy the new movement, and work it up in watches made by themselves ? Where men have neither fire-engines nor watches, it is highly probable that they will go to the inventor of the last and best improvements for the whole machine ; and if they do, it is an advantage which the inventor gets from the option of mankind, and not from any exclusive right or monopoly vested in him. But here the plaintiffs claim the right to the whole machine. To that extent their right cannot be sustained, and therefore I am of opinion that there ought to be judgment for the defendant.

EYRE, C. J. Upon this case two questions are reserved for the opinion of the court : the first, whether the patent is good in law, and continued by the act of Parliament mentioned in the case. The second, whether the specification stated in the case is, in point of law, sufficient to support the patent. As I take it, the facts of the case are stated with a view to the application of them to these questions, and not to any other questions which may be thought to arise upon them. Perhaps, indeed, if the court saw that another material question might arise out of these facts, which had escaped the attention of the court and jury at *nisi prius*, they might direct the case to be amended, or a new trial to be had in order to introduce it. These two questions were thus stated in order to bring before the court the points of law insisted on upon the part of the defendant, and also to give an opportunity for considering a

doubt which occurred to me upon my first view of the case at the trial, which was whether a patent right could attach upon anything not organized and capable of precise specification. As those two questions are framed, there are three points for the consideration of the court: 1, whether the patent was, in its original creation, good or bad; 2, taking it to be good, whether it was continued by the act of Parliament; and, 3, taking it to be good in its original creation, and to have been continued by the act of Parliament, subject to an objection for the want of a specification, whether there has been a sufficient specification. Though we have had many cases upon patents, yet I think we are here upon ground which is yet untrodden, at least was untrodden till this cause was instituted, and till the discussions were entered into which we have heard from the bar, and now from the court. Patent rights are nowhere, that I can find, accurately discussed in our books. Sir Edward Coke discourses largely, and sometimes not quite intelligibly, upon monopolies, in his chapter of monopolies, 3 Inst. 181; but he deals very much in generals, and says little or nothing of patent rights as opposed to monopolies. He refers principally to his own report of the Case of Monopolies, 11 Co. 86, *b.*; he also mentions a resolution of all the judges in 2 and 3 Eliz. from a manuscript of Dyer, condemning a grant to the corporation of Southampton by Philip and Mary for the sole right of importing Malmsey wine, and that no Malmsey wine should be landed at any other place, upon pain to pay treble customs. He also mentions Bircot's Case in the Exchequer Chamber for a privilege concerning the preparing and melting of lead ore, but he states no particulars; and the principle on which that case was determined has been, as my brother Buller observes, not adhered to; namely, that an addition to a manufacture cannot be the subject of a patent. There is also a case in Godbolt, 252 (Clothworker's Case, *ante*, p. 6), and there are a few others condemning particular patents which were beyond all doubt mere monopolies. The modern cases have chiefly turned upon the specifications, whether there was a fair disclosure. Such was the case of *Turner v. Winter*

(*ante*, p. 43). The case of *Edgeberry v. Stephens* (*ante*, p. 8) is almost the only case upon the patent right under the saving of the statute of Jac. I. that is to be found. That case establishes that the first introducer of an invention practised beyond sea shall be deemed the first inventor ; and it is there said, the act intended to encourage new devices, useful to the kingdom ; and whether acquired by travel or study, it is the same thing. Deriving so little assistance from our books, let us resort to the statute itself, 21 Jac. I., c. 3. We shall there find a monopoly to be "the privilege of the sole buying, selling, making, working or using anything within this realm ;" and this is generally condemned as contrary to the fundamental law of the land. But the fifth and sixth sections of that statute save letters patent, and grants of privileges of the sole working or making of any manner of new manufacture within this realm, to the first and true inventor and inventors of such manufactures ; with this qualification, "so that they be not contrary to the law nor mischievous to the state" in these three respects : 1, "by raising the prices of commodities at home ;" 2, "by being hurtful to trade ;" or, 3, by being "generally inconvenient." According to the letter of the statute, the saving goes only to the sole working and making ; the sole buying, selling and using remain under the general prohibition, and with apparent good reason for so remaining ; for the exclusive privilege of buying, selling and using could hardly be brought within the qualification of not being contrary to law and mischievous to the state in the respects which I have mentioned. I observe also that according to the letter of the statute, the words, "any manner of new manufacture" in the saving, fall very short of the words "anything" in the first section ; but most certainly the exposition of the statute, as far as usage will expound it, has gone very much beyond the letter. In the case of *Edgeberry v. Stephens*, the words "new devices" are substituted and used as synonymous with the words "new manufacture."

It was admitted in the argument at the bar that the word "manufacture" in the statute was of extensive signifi-

tion ; that it applied not only to things made, but to the practice of making, to principles carried into practice in a new manner, to new results of principles carried into practice. Let us pursue this admission. Under things made, we may class, in the first place, new compositions of things, such as manufactures in the most ordinary sense of the word ; secondly, all mechanical inventions, whether made to produce old or new effects, for a new piece of mechanism is certainly a thing made. Under the practice of making we may class all new artificial manners of operating with the hand, or with instruments in common use, new processes in any art producing effects useful to the public.

When the effect produced is some new substance or composition of things, it should seem that the privilege of the sole working or making ought to be for such new substance or composition, without regard to the mechanism or process by which it has been produced, which, though perhaps also new, will be only useful as producing the new substance. Upon this ground Dollond's patent was perhaps exceptionable, for that was for a method of producing a new object-glass, instead of being for the object-glass produced. If Dr. James's patent had been for his method of preparing his powders, instead of the powders themselves, that patent would have been exceptionable upon the same ground. When the effect produced is no substance or composition of things, the patent can only be for the mechanism, if new mechanism is used, or for the process, if it be a new method of operating with or without old mechanism by which the effect is produced.

To illustrate this : the effect produced by Mr. David Hartley's invention for securing buildings from fire is no substance or composition of things ; it is a mere negative quality, the absence of fire : this effect is produced by a new method of disposing iron plates in buildings. In the nature of things, the patent could not be for the effect produced ; I think it could not be for the making the plates of iron, which, when disposed in a particular manner, produce the effect, for those are things in common use. But the invention consisting in the method of disposing those plates

of iron so as to produce their effect, and that effect being a useful and meritorious one, the patent seems to have been very properly granted to him for his method of securing buildings from fire. And this compendious analysis of new manufactures mentioned in the statute satisfies my doubt whether anything could be the subject of a patent but something organized and capable of precise specification. But for the more satisfactory solution of the other points which are made in this case, I shall pursue this subject a little further. In Mr. Hartley's method, plates of iron are the means which he employs, but he did not invent those means ; the invention wholly consisted in the new method of using, or I would rather say, of disposing a thing in common use, and which thing every man might make at his pleasure, and which therefore, I repeat, could not in my judgment be the subject of the patent. In the nature of things, it must be that in the carrying into execution any new invention, use must be made of certain means proper for the operation. Manual labor, to a certain degree, must always be employed, the tools of artists frequently, often things manufactured but not newly invented, such as Hartley's iron plates, all the common utensils used in conducting any process, and so up to the most complicated machinery that the art of man ever devised. Now let the merit of the invention be what it may, it is evident that the patent in almost all these cases cannot be granted for the means by which it acts, for in them there is nothing new, and in some of them nothing capable of appropriation. Even where the most complicated machinery is used, if the machinery itself is not newly invented, but only conducted by the skill of the inventor, so as to produce a new effect, the patent cannot be for the machinery. In Hartley's case, it could not be for the effect produced, because the effect, as I have already observed, is merely negative, though it was meritorious. In the list of patents with which I have been furnished, there are several for new methods of manufacturing articles in common use, where the sole merit and the whole effect produced are the saving of time and expense, and thereby lowering the price of the article and introducing it into more general use.

Now I think these methods may be said to be new manufactures, in one of the common acceptations of the word, as we speak of the manufacture of glass, or any other thing of that kind. The advantages to the public from improvements of this kind are, beyond all calculation, important to a commercial country, and the ingenuity of artists who turn their thoughts toward such improvements is in itself deserving of encouragement ; and, in my apprehension, it is strictly agreeable to the spirit and meaning of the statute 21 Jac. I. that it should be encouraged ; and yet the validity of these patents, in point of law, must rest upon the same foundation as that of Mr. Hartley's. The patent cannot be for the effect produced, for it is either no substance at all, or, what is exactly the same thing as to the question upon a patent, no new substance, but an old one produced advantageously for the public. It cannot be for the mechanism, for there is no new mechanism employed : it must, then, be for the method ; and I would say, in the very significant words of Lord Mansfield, in the great case of the copyright (4 Burr. 2397), it must be for method detached from all physical existence whatever ; and I think we should well consider what we do in this case, that we may not shake the foundation upon which these patents stand. Probably I do not overrate it when I state that two thirds, I believe I might say three fourths, of all patents granted since the statute passed are for methods of operating and of manufacturing, producing no new substances and employing no new machinery. If the list were examined, I dare say there might be found fifty patents for methods of producing all the known salts, either the simple salt or the old compounds. The different sorts of ashes used in manufactures are many of them inventions of great merit, many of them probably mere speculations of wild projectors ; the latter ought to fall, the former to stand. If we wanted an illustration of the possible merit of a new method of operating with old machinery, we might look to the identical case now in judgment before the court. If we consider into what general use fire-engines are come, that our mines cannot be worked without them, that they are essentially

necessary to the carrying on of many of our principal manufactures, that these engines are worked at an enormous expense in coals, which in some parts of the kingdom can with difficulty be procured at all in large quantities, it is most manifest that any method found out for lessening the consumption of steam in the engines, which, by necessary consequence, lessens the consumption of coals expended in working them, will be of great benefit to the public, as well as to the individual who thinks fit to adopt it. And shall it now be said, after we have been in the habit of seeing patents granted in the immense number in which they have been granted for methods of using old machinery, to produce substances that were old, but in a more beneficial manner, and also for producing negative qualities by which benefits result to the public, by a narrow construction of the word "manufacture" in this statute, that there can be no patent for methods producing this new and salutary effect, connected, and intimately connected as it is, with the trade and manufactures of the country? This, I confess, I am not prepared to say. An improper use of the word "principle," in the specification set forth in this case, has, I think, served to puzzle it. Undoubtedly, there can be no patent for a mere principle; but for a principle so far embodied and connected with corporeal substances as to be in a condition to act and to produce effects in any art, trade, mystery or manual occupation, I think there may be a patent. Now this is, in my judgment, the thing for which the patent stated in the case was granted, and this is what the specification describes, though it miscalls it a principle. It is not that the patentee has conceived an abstract notion that the consumption of steam in fire-engines may be lessened, but he has discovered a practical manner of doing it, and for that practical manner of doing it he has taken his patent. Surely, this is a very different thing from taking a patent for a principle; it is not for a principle, but for a process. I have dwelt the more largely upon this part of the case, because, in my apprehension, this is the foundation upon which the whole argument will be found to rest. If, upon the true construction of the statute, there may be

a patent for a new method of manufacturing or conducting chemical processes, or of working machinery so as to produce new and useful effects, then I am warranted to conclude that this patent was, in its original creation, good. I will next consider the specification before I proceed to the consideration of the questions arising upon the statute for continuing this patent. The specification has reference to the patents and not to the statutes, and therefore it will be proper to consider it in this stage of the argument. I distinctly admit that if this patent is to be taken to be a patent for a fire-engine, the specification is not sufficient; it is not a specification of mechanism of any determinate form, having component parts capable of precise arrangement and of particular description. On the other hand, if the patent is not for a fire-engine, but in effect for a manner of working a fire-engine so as to lessen the consumption of steam, which, as I conceive, the words of the patent import, let us see whether this specification does not sufficiently describe a manner of working fire-engines so as to produce the effect expressed in the patent, and whether the only objection to the specification is not that it is loaded with a redundancy of superfluous matter. The substance of the invention is a discovery that the condensing the steam out of the cylinder, and protecting the cylinder from the external air, and keeping it hot to the degree of steam heat, will lessen the consumption of steam. This is no abstract principle, it is in its very statement clothed with practical application: it points out what is to be done in order to lessen the consumption of steam. Now, the specification of such a discovery seems to consist in nothing more than saying to the constructor of a fire-engine, "For the future condense your steam out of the body of the cylinder instead of condensing it within it, put something round the cylinder to protect it from the external air and to preserve the heat within it, and keep your piston air-tight without water." Any particular manner of doing this, one should think, would hardly need to be pointed out, for it can scarcely be supposed that a workman, capable of constructing a fire-engine, would not be capable of making such addi-

tions to it as should be necessary to enable him to execute that which the specification requires him to do. But if a very stupid workman should want to know how to go about this improvement, and in answer to his question was directed to conduct the steam which was to be condensed from the cylinder into a close vessel by means of a pipe and a valve communicating with the cylinder and the close vessel, to keep the close vessel in a state of coldness sufficient to produce condensation, and to extract from it any part of the steam which might not be condensed by the pump; and was also told to enclose the cylinder in a wooden case, and to use a resinous substance instead of water to keep the piston air-tight, can it be imagined that he would be so stupid as not to be able to execute this improvement with the assistance of these plain directions? If any man could for a moment imagine that this was possible, I observe that this difficulty is put an end to, because the jury have found that a workman can execute this improvement in consequence of the specification. Some machinery, it is true, must be employed, but the machinery is not of the essence of the invention, but incidental to it. The steam must pass from the cylinder to the condensing vessel, for which purpose there must be a valve to open, a pipe to convey, and a vessel to receive the steam; but this cannot be called new invented machinery, whether considered in the parts or in the whole, and therefore there can be no patent for this addition to the fire-engines. Suppose a new invented chemical process, and the specification should direct that some particular chemical substance should be poured upon gold in a state of fusion, it would be necessary, in order to this operation, that the gold should be put into a crucible, and should be melted in that crucible; but it would be hardly necessary to state in the specification the manner in which or the utensils with which the operation of putting gold into a state of fusion was to be performed. They are mere incidents, with which every man acquainted with the subject is familiar. Some observations were made, in the course of the argument at the bar, on its being left unascertained, both in the specification and case, to what extent

the consumption of steam would be lessened by the invention ; but the method does not profess to ascertain this, it professes to lessen the consumption ; and to make the patent good, the method must be capable of lessening the consumption to such an extent as to make the invention useful : more precision is not necessary, and absolute precision is not practicable. The quantity of steam which will be saved in each machine must depend upon a great variety of circumstances respecting each individual fire-engine, such as the accuracy of casting or boring the cylinder, or the dimensions of it, the accuracy of the workman in putting his apparatus together, the care in keeping the cylinder in a proper degree of heat, and the more or less perfect order for working in which the engine is kept : all these circumstances will affect the quantity of steam to be lessened. Some weighty observations have been made upon parts of this specification, but those parts appear to me not properly to relate to the method described in the patent ; they are rather intimations of new projects of improvement in fire-engines, and some of them, I am very ready to confess, either very loosely described or not very accurately conceived ; I do not undertake to pronounce which, but one or other is pretty clear. They are the fourth and fifth articles ; the first, second, third and sixth appear to me to belong to this method, and very clearly to point out and explain the method to every man who has a common acquaintance with the subject, and to be intelligible even to those who are unacquainted with it. If there be a specification to be found in that paper, which goes to the subject of the invention as described in the patent, I think the rest may very well be rejected as superfluous. If, indeed, the defendant could have shown that he had not pirated the invention which is sufficiently specified, but that what he hath done hath a reference to another method of lessening the consumption of steam, to which the questionable parts of the specification were meant to relate, the objection to the specification would have remained, and perhaps some other objections, which have been alluded to, might have been taken both to the patent and specification. But I would observe here

that, with regard to this and some other difficulties, there is no question reserved in this case respecting the infringement of the patent; the general fact only is stated that it has been infringed by the defendant, and, in the consideration of a case reserved, we are not to search for difficulties upon which the parties have not proposed to state any point to us for our judgment, and into which, I think, we are not at liberty to go. The difficulty which struck me, as it did my brother Buller, with respect to the declaration, is applied to the patent as it originally stood, not as it now stands, continued by the act of Parliament. If we were at liberty to go into it, that difficulty might, perhaps, produce a nonsuit, and that nonsuit a new action, in which the difficulty would be removed. But this cause was instituted to try the merits of the patent; I thought, therefore, that a formal objection was wisely overlooked. Supposing, then, the difficulty upon the patent itself and the specification to be got over, the act of Parliament remains to be considered. The objection, stated in the strongest manner, would amount to this, that the act continues a patent for a machine, when, in fact, the patent is for a process. It is to be observed that there is nothing technical in the composition or the language of an act of Parliament: in the exposition of statutes, the intent of Parliament is the guide. It is expressly laid down in our books—I do not here speak of penal statutes—that every statute ought to be expounded, not according to the letter, but the intent. (2 Roll. Abr. 118; Plowd. 350, 363.) This doctrine has been carried into effect by cases: though a corporation be misnamed in an act of Parliament, if it appears that the corporation was intended, it is sufficient (11 Co. 57, b). So the statute of *Quia emptores terrarum* has said that every one shall hold of the lord paramount *secundum quantitatem terræ*, but this shall be construed to be *secundum valorem terræ*, for so was the intent. (Plowd. 10, 57.) We all know that an act of Parliament may be extended by equity. No authority has been cited which amounts to proof that a mistake in point of description, in an act of Parliament of this nature, when the true meaning can be discovered, and when

foundation on which the act can be supported, ~~shall~~ vitiate it. The case cited from Plowden differs essentially from this case. The act of Parliament in that case gave effect to a supposed legal attainder, and proceeded upon it altogether. If the groundwork fell and there was no legal attainder, nothing remained; the supposed attainder in that case fell, consequently all fell. Now the difference between that case and the present is this: here the true patent meant to be described exists, and may, therefore, be a groundwork to support the act. This case was compared to the case of the king being deceived in his grant, but I am not satisfied that the king, proceeding by and with the advice of Parliament, is in that situation, in respect of which he is under the special protection of the law, and that he could, on that ground, be considered as deceived in his grant; no case was cited to prove that position. The objection on the act of Parliament is of the same nature as one of the objections to the specification; the specification calls a method of lessening the consumption of steam in fire-engines a principle, which it is not; the act calls it an engine, which perhaps also it is not; but both the specification and statute are referable to the same thing, and, when they are taken with their correlative, are perfectly intelligible. Upon the wider ground, I am therefore of opinion that the act has continued this patent. A narrower ground was taken in the argument, which was to expound the word "engine" in the body of this act, in opposition to the title of it, to mean a method; and I am ready to say, I would resort to that ground, if necessary, in order to support the patent, *ut res magis valeat quam pereat*. But it is not necessary: for let it be remembered that, though monopolies in the eye of the law are odious, the consideration of the privilege created by this patent is meritorious, because, to use the words of Lord Coke, "the inventor bringeth to and for the commonwealth a new manufacture by his invention, costs and charges." I conclude, therefore, that the judgment of the court ought to be for the plaintiff.

The court being thus equally divided, two judges being

for and two against the validity of the patent, no judgment was given.

CAMERON v. GRAY.

King's Bench, June 13, 1795.

Change of Venue disallowed.

Gaselee moved to change the venue in this action, which was for infringing the plaintiff's patent, from Middlesex to Northumberland, upon the common affidavit that the cause of action arose in the latter county.

LORD KENYON, C. J. The plaintiff cannot make the proper and necessary affidavit, that the cause of action arose wholly in Northumberland and not elsewhere, when it is manifest that the substratum of the action, namely, the patent, is at Westminster.

Rule refused.

BOULTON v. BULL.

Chancery, June 2, 1796.

Validity of Patent sub Judice. Injunction denied.

In a case where patentee had been in possession for twenty-seven years an injunction was granted in order that the question of the validity of the patent might be tried. Upon the trial a verdict was rendered for plaintiff, subject to the opinion of the court upon a case stated. On the hearing upon the case the court was equally divided in opinion as to the validity. *Held*, that the injunction ought to be continued until another action should be brought.

Motion to dissolve an injunction.

Plaintiffs were patentees of a fire-engine. After they had been in possession for twenty years they obtained an injunction in aid of an action to try the validity of the patent at law. They then brought such an action in the Common Pleas; and upon the trial they recovered a verdict in their favor, subject to the opinion of the court on a case stated.

Upon the argument of that case the court was equally divided. (See *Boulton v. Bull*, *ante*, p. 59.) Motion was now made to dissolve the injunction.

Lord Chancellor LOUGHBOROUGH. I cannot put the patentees upon the acceptance of terms that, upon collateral reasons, they think may be disadvantageous to the exercise of the right of which they are in full possession; neither can I put them out of possession upon the difference of opinion of the court; that is not the fault of the plaintiffs. What has passed in the Court of Common Pleas does not shake their right, but strongly supports it. The verdict, though it has failed of effect, is not to be disregarded. The opinions of the judges on both sides are deserving of great respect. If nothing can be done upon this, there must be another action. In the mean time, the injunction must be continued. I will not put them to compensation; I will not disturb the possession of their specific right. It is of notoriety that this fire-engine has been erected in many parts of the country with great advantage.

Injunction continued.

This question was afterward decided in the Court of King's Bench, in the case of *Hornblower v. Boulton* (*post*), which went thither by error from the Court of Common Pleas.

HORNBLOWER v. BOULTON.

King's Bench, Jan. 25, 1799.

Sufficiency of Specification. Effect of General Verdict.

The sufficiency of a specification does not depend upon its correctness in the use of technical words; the questions are, whether the invention is a "manufacture" and whether the specification is such as will enable a mechanic to make the thing it describes.

A general verdict for plaintiff in an action for damages for infringement implies that the claim and description are sufficient.

Error to review a judgment of the Court of Common Pleas.

The action was case for infringement of a patent, the specification of which appears in *Boulton v. Bull* (*ante*, p. 59).

The defendants below pleaded not guilty. A general verdict having been found for the plaintiffs below, and judgment rendered thereon by the Court of Common Pleas, the defendants below brought error; assigning among other grounds that the invention for which the patent was granted was not an invention of any formed or organized machine, instrument or manufacture, but of mere principles only, and not patentable. They contended, 1, that unless the patent could be established as for a formed machine, it could not be supported under statute 21 Jac. I., c. 3; 2, that the patent in question could not be considered a patent for a machine; 3, that the specification did not contain a sufficient description of a machine; and, 4, that the patent was taken for the whole when it ought to have been taken as for an addition merely, only the addition appearing from the specification to have been of plaintiff's invention.

Lord KENYON, C. J. It was rather from deference to the very respectable opinions given in the Court of Common Pleas on the former occasion (*Boulton v. Bull*, *ante*, p. 59) than from any doubt we entertained on the subject that a second argument was awarded here; but the case having been most ably argued, and every argument advanced at the bar that bears upon it, I wish to deliver my opinion now to prevent any further delay to the parties interested. I confess I am not one of those who greatly favor patents; for though in many instances, and particularly in this, the public are benefited by them, yet, on striking the balance upon this subject, I think that great oppression is practised on inferior mechanics by those who are more opulent. The principal objection made to this patent by the plaintiffs in error is that it is a patent for a philosophical principle only, neither organized nor capable of being organized; and if the objection were well founded in fact, it would be decisive: but I do not think it is so. No technical words are necessary to explain the subject of a patent; as Lord Hardwicke said, upon another occasion, "there is no magic in words."

The questions here are, whether, by looking at the patent, explained as it is by the specification, it does not appear to be a patent for a manufacture, and whether the specification is not sufficient to enable a mechanic to make the thing described. The jury have not, indeed, answered those questions in the affirmative in terms ; but they have impliedly done so by finding a general verdict for the plaintiffs below. By comparing the patent and the manufacture together, it evidently appears that the patentee claims a monopoly for an engine or machine, composed of material parts, which are to produce the effect described, and that the mode of producing this is so described as to enable mechanics to produce it. Having said thus much, it appears that the subject, as far as we have to treat of it, is exhausted. I have great respect for the contrary opinions that were given in the Common Pleas, and probably, if I had been called upon on a sudden to determine this case, I should have been at a loss how to decide. But having now heard everything that can be said on the subject, I have no doubt in saying that this is a patent for a "manufacture," which I understand to be something made by the hands of man.

ASHURST, J. Every new invention is of importance to the wealth and convenience of the public ; and when they are enjoying the fruits of a useful discovery, it would be hard on the inventor to deprive him of his reward. In this case, the jury have found by their verdict that all the allegations in the declaration were proved ; one of which was that the inventor had, by his specification, particularly described the nature of his invention, and the manner in which it was to be performed ; and having thus complied with the terms of the patent, I think he is, in point of law as well as justice, entitled to the benefit which the patent and the act of Parliament intended to confer on him.

GROSE, J. This is an action for violating that right, supposed to have been given originally for fourteen years by the patent in 1769, and contended to be continued to James Watt, his representatives and assigns, for twenty-five years, by the statute in 1774. The statute recites the patent, the benefit of which is now determined by flux of time ; and,

therefore, the action can only be sustained on the continuance of that benefit to the patentee by the Legislature. The statute, however, expressly provides that every objection in law, competent against the patent, shall also be competent against the statute; that is, against the benefit to be derived to the patentee under the statute. The question then is, whether the patent be good in law; in other words, whether it be conformable to the statute of 21 Jac. I., c. 3, sec. 6, under which the plaintiff, or any party, can alone claim the privilege of a monopoly. The power thereby reserved to the king is "that any declaration before-mentioned shall not extend to any letters patent and grants of privilege, for the term of fourteen years or under, thereafter to be made, of the sole working or making of any manner of new manufactures within this realm, to the true and first inventor and inventors of such manufactures, which others, at the time of making such letters patent and grants, shall not use, so as also they be not contrary to the law nor mischievous to the state, by raising prices of commodities at home; or hurt of trade, or generally inconvenient." The questions upon this patent are, whether it be a patent for the sole working or making of any manner of new manufacture; whether the patentee were the first inventor; whether it be contrary to law, mischievous to the state or to trade, or generally inconvenient.

By a proviso in the patent, the patentee is bound particularly to describe and ascertain the nature of his invention, and in what manner the same was to be performed, by an instrument in writing under his hand and seal, and to cause the same to be enrolled in Chancery. On which another question arises, namely, whether the specification enrolled be sufficient. The aim of the Legislature is obvious; on the one hand, it was to encourage ingenious artificers and able and studious men to invent and bring forward, for the use of the public, new manufactures, the produce of their own ingenuity, by holding out to them the reward of fourteen years' monopoly; on the other hand, to secure to the public the benefit of the discovery, by causing to be enrolled a complete description of the thing to be done and the manner

of doing it, that others might be fully informed of it, and at the end of the fourteen years to be enabled to work or make the manufacture of which the patentee was the inventor. Upon some of the questions there seems to be no doubt: there is no doubt on this record, coupled with the finding of the jury, that the patentee was the inventor of that which is stated in the declaration to be (by whatever name it may be called) an invention, method, principle or manufacture. Neither is it contended that the subject of the patent is mischievous to the state, hurtful to trade, or generally inconvenient. On the contrary, every man's experience, as far as report goes, tells him that the invention has infinite merit, is for very many purposes highly beneficial to the public, and is in great request. As to the specification, I shall content myself with repeating what was said by one of the learned judges of the Court of Common Pleas, that if the specification be such as to enable artists to adopt the invention and make the manufacture, it is sufficient. It is averred in the declaration that the patentee did, in pursuance of the proviso, particularly describe and ascertain the nature of the invention, and in what manner the same was to be performed, by an instrument in writing under his hand and seal enrolled in the Court of Chancery; that fact was necessary to be proved to entitle the plaintiffs to a verdict, and by the verdict which they obtained, I consider that fact as ascertained and concluded in their favor.

The important question is, whether it be a patent for the making or working of any manner of new manufacture. It is argued by the plaintiffs in error, 1, that it is a patent for a mere principle, and not for a new manufacture, and that nothing can be the object of a patent but a new manufacture; 2, that if it be a patent for a manufacture, namely, the steam-engine, it is not new, and that the patent should have been for the addition only, and not for the whole engine. As to the first of those propositions, that under the statute of James there cannot be a patent for a mere principle, which this is contended to be, it is not necessary for me, in my way of considering the case, to form a decided opinion on that point; for if I can show

that this is a patent for a new manufacture, whether a patent for a mere principle be good or not, will be immaterial. Upon that point I shall only say that, having very much turned the question in my mind, and weighed and considered again and again the words of the statute, specifying what patents the Crown may grant, upon which alone I conceive the question must ultimately depend, I am not prepared to say that a patent for a mere principle was intended to be comprehended within those words. It is indeed difficult to conceive that the Legislature, in giving power to the Crown to grant patents for the sole working or making of any manner of new manufacture, intended a power to grant patents for any other purpose than those expressly mentioned. But, as I said before, this is not material for me to determine, inasmuch as it seems to me, upon the best consideration, that this is not a patent for a mere principle, but for the working and making of a new manufacture within the words and meaning of the statute. I have been led to adopt this opinion by considering the words and description of the invention in the patent, as referring to and explained by the specification, and the specification itself as part of the patent. The ground on which I have felt myself at liberty to do so is this. The benefit to the public is from the specification disclosing to the world how others may make and use the same manufacture; without the specification the public have not that information; and by the condition of the letters patent, without the specification the patentee is not entitled to his monopoly. It being provided therefore by the patent that there must be a specification, and there being necessarily one in consequence of that proviso, I consider the patent and specification so connected together as to make a part of each other, and that to learn what the patent is, I may read the specification and consider it as incorporated with the patent. Now the patent recites that Mr. Watt had invented a method of lessening the consumption of steam and fuel in fire-engines; it grants to him the sole use and exercise of that invention, upon condition he would disclose the nature of the invention, and in what manner the same was to be

performed by an instrument enrolled. He does so, and that instrument describes the principles of the method, and the method by which those principles are to be carried into effect. The method is founded on the principles of keeping the steam-vessel the whole time the engine is at work as hot as the steam that enters it; this is to be done, 1. By the manufacture of a case of wood, or some other material that transmits heat slowly, and by surrounding it with steam or other heated bodies, and suffering neither water nor any other substance colder than steam to touch it. 2. He points out a mode of condensing the steam by vessels to be used distinctly from the steam-vessels at some times; at others, they are to communicate with them, which he calls condensers; and these are new, at least not part of the old engine, and are to be kept as cold as the air in the neighborhood of the engines. 3. He gives directions as to drawing out the air not condensed by the cold of the condenser. 4. He states how he means to employ steam to press out the piston in given cases. 5. He directs how steam-vessels should be formed where rotatory motions, or motions round an axis, are required, namely, with weights and valves; and directs how in such case the steam-vessel shall be supplied with steam, and how that which has done its office shall be discharged. And he also states a method by which the engine may be worked by the alternate expansion and contraction of the steam. This method, however, if not effected or accompanied by a manufacture, I should hardly consider as within the statute of James. But it seems to me that in this specification he does describe a new manufacture, by which his principle is realized, that is, by which his steam-vessel is kept as hot as the steam during the time the engine is at work, by which means the consumption of steam and fuel is lessened. Thus he specifies the particular parts requisite to produce the effect intended, and states the manner how they are to be applied. He describes the case of wood in which the steam-vessel is to be enclosed, the engines that are to be worked wholly or partially by condensation of steam, the vessels that he denominates condensers, and the steam-vessel where rotatory

motions are required. Can it then be said that the making and combining of these parts is not some manner of new manufacture? I cannot say that it is not. But if that had been doubtful, the verdict ascertains the fact. But then it is objected that the patent should have been for the manufacture, whereas it is for principles which the specification describes. To which I answer that the patent is not merely for principles, nor does the specification describe principles only. The patent states the principles on which the inventor proceeds, and shows in his specification the manufacture by means of which those principles are to take effect, which is to be the lessening of the consumption of steam and fuel by keeping the steam-vessel of one uniform heat with the steam so long as the engine is worked.

Taking it, however, as a patent for an engine, it is objected that the thing was made before, and that the patent should have been for the addition only, and not for the whole engine. But I do not consider it as a patent for the old engine, but only for the addition to or improvement of the old engine, and so the act of Parliament considers it. The old engine consumed too much steam and fuel, and it was considered that by a case of wood, or of other material that would transmit heat slowly, surrounding it with steam by the use of condensers, and doing that which was not done in the old engine, but is in this, the defects in the old engine might be corrected, and the new one, by its addition, made more useful. Experiments were tried, as appears by the act of Parliament, and the purpose for which these additions were made is ultimately found to be completely attained by the method pointed out in the specification. It possibly occurred to the inventor that if the patent were to be obtained for the whole engine, it might be open to cavil, and therefore he took out his patent, not for the engine, but for his invention of a method for lessening the consumption of steam and fuel in fire-engines. The method is disclosed in the specification, and it is by the addition of what is there disclosed and by managing it in the way described. The patent therefore is only for that additional improvement, as described in the specification, and there is

no pretence to say that he claims, or could claim, the sole making of the old engine. But a doubt is entertained whether there can be a patent for an addition to an old manufacture; this doubt rests altogether upon Bircot's Case (3 Inst. 184), and if that were to be considered as law at this day, it would set aside many patents for very ingenious inventions, in cases where the additions to manufactures before existing are much more valuable than the original manufactures themselves. I shall content myself with referring to what Lord Chief Justice Eyre said in this cause in the Court of Common Pleas, in answer to this, and to the case of *Morris v. Bramson* (*ante*, p. 21), cited by my brother Buller upon the same point. If indeed a patent could not be granted for an addition, it would be depriving the public of one of the best benefits of the statute of James. Lord Coke's opinion therefore seems to have been formed without due consideration, and modern experience shows that it is not well founded.

The statute 15 Geo. III., I observe, secures to the patentee the privilege of constructing and selling the engines in words, on which account it has been objected that it falsely recites the patent, and therefore cannot operate in support of it; but the statute must have a reasonable construction to support rather than defeat the intention of the Legislature and their grant; and by attending to every part of the statute, it is obvious that the engines secured to the patentee are such as are improved in the manner stated in the specification, and not the original fire-engines. For the statute reciting the patent recites it as a grant of the benefit and advantage of making and vending "certain engines by him invented for lessening the consumption of steam and fuel in fire-engines." Now those were not the original fire-engines, but the improved ones, and those that were so improved were the only ones invented for lessening the consumption of steam and fuel in fire-engines, which shows that the Legislature considered the patent as a patent for the improvement of the engine described in the specification, and not as a patent for a mere method or for the original fire-engine. The subject is new to me, not affecting to be a

mechanic, and I have had great difficulties in making up my mind upon it. I am inclined, however, to think that a patent cannot be granted for a mere principle ; but I think that although, in words, the privilege granted is to exercise a method of making or doing anything, yet if that thing is to be made or done by a manufacture, and the mode of making that manufacture is described, it then becomes in effect (by whatever name it may be called) not a patent for a mere principle, but for a manufacture, for the thing so made, and not merely for the principle upon which it is made. Where, then, is the mischief to the public, or how in this case is the intention of the Legislature defeated ? They intended that after fourteen years the public should, from the specification, be in possession of the manufacture and the art of making it, and that for those fourteen years the patentee should have the monopoly of it as his reward. The patent is nothing without the specification, and the patentee can gain no advantage by it. It is also useless unless the specification be such from which the public may gain information ; therefore, whether the patent call the manufacture by its name, or style it an invention, a mode, a method, or any other manner, it signifies nothing, for the specification describing the thing as required by the patent must be resorted to, and may fairly be deemed a part of the patent itself. If that be so, I read this patent, and find that it is for a method to be pursued according to the directions of the specification, and looking to the specification, I see that by pursuing the method pointed out, a manufacture is produced by the ingenuity of the inventor, and of which the public are to have the benefit. Then the intention of the Legislature is fulfilled ; the public enjoy the fruits of the author's ingenuity, and the author gets the monopoly for a certain term. It signifies nothing to either whether the patent be for the engine so made or for the method of making it, if that method be sufficiently described in the specification. Upon these grounds, with that deference which I ought to feel upon a subject with which I do not profess myself to be much conversant, my opinion is that the judgment of the Court of Common Pleas ought to be affirmed.

LAWRENCE, J. Two objections have been made by the plaintiffs in error: 1, that this is not an invention for any formed or organized machine, instrument or manufacture, but of mere principles only; 2, that the specification is bad. As to the first, the claim of the plaintiffs below is founded on the proviso in the statute of James, which allows the Crown to grant patents in favor of new manufactures, and therefore it must rest on the ground of Watt having invented some new manufacture. If it were necessary to consider whether or not mere abstract principles are the subject of a patent, I should feel great difficulty in deciding that they are; but that consideration is unnecessary on the present occasion, because, by looking at the patent and the recital in the act of Parliament, it appears that Watt applied for and obtained a patent for an engine or mechanical contrivance for lessening the consumption of steam in fire-engines. The letters patent recite that he had invented a method of lessening the consumption of steam, and grant to him the sole right of using the said invention for fourteen years. In order to see what the invention was, it is necessary to refer to the specification; that states what the invention is, and that the method consists in certain principles, as they are called, which are described in the specification. Then followed the statute, which, after reciting that the king had granted to Watt the sole benefit of making and vending certain engines, invented by him, for lessening the consumption of steam in fire-engines, and that there was enrolled in the Court of Chancery a description of the said engine, vests in him the sole right of making and selling the said engines for twenty-five years. From this therefore it is clear that the Legislature understood that the patent was for an engine for some mechanical contrivance, and the form of the patent and the specification does not contradict this. "Engine" and "method" mean the same thing, and may be the subject of a patent. "Method," properly speaking, is only placing several things and performing several operations in the most convenient order, but it may signify a contrivance or device; so may an engine, and therefore I think it may answer the word

“method.” So “principle” may mean a mere elementary truth, but it may also mean constituent parts ; and in effect the specification is this, “the contrivance by which I lessen the consumption of steam consists in the following principles” (that is, constituent or elementary parts) ; “a steam-vessel, in which the powers of steam are to operate, to be kept as hot as the steam by a case ; a distinct vessel to condense the steam ; and pumps to draw off such vapor as is likely to impede the motion of the fire-engine,” etc. That is the description of the thing when put into different language. Then taking this to be a patent for an engine, it is objected that the specification is bad. In considering that question, it is necessary to see for what Mr. Watt has obtained his patent. He does not claim it for an improvement to a fire-engine for any particular purpose, *e.g.*, for raising water out of mines, or any other specific thing ; but his claim is generally to an invention for lessening the consumption of steam applicable to all fire-engines for whatever purpose they may be used, and whatever may be their construction, by an alteration of and addition to parts which are common to all, and upon which their powers of working depend. The objection that requires a more full description of the engine goes the length of requiring a description of every engine that is acted upon by the force of steam. But I do not think that if his specification had been so comprehensive, his invention would have entitled him to a patent for the sole vending and making the whole engine so altered and improved ; for such a patent would have been more extensive than the thing invented. The patent must be supported, as granted for an improvement and addition to old engines, known and in use ; and I think that the patent is good in this point of view. For Watt claims no right to the construction of engines for any determinate object, except that of lessening the consumption of fuel in such pre-existing engines, and for nothing else. In the argument, the engine to diminish the consumption of steam was confounded with that which was intended to improve. Some of the difficulties in the case have arisen from considering the word engine in its popular sense.

namely, some mechanical contrivance to effect that to which human strength, without such assistance, is unequal ; but it may also signify "device;" and that Watt meant to use it in that sense, and that the Legislature so understood it, is evident from the words "engine" and "method" being used as convertible terms. Now there is no doubt but that for such a contrivance a patent may be granted, as well as for a more complicated machine ; it equally falls within the description of a "manufacture," and unless such devices did fall within that description, no addition or improvement could be the subject of a patent. If this be so, it only remains to be considered whether or not, for the improvement of fire-engines, Watt has with sufficient accuracy stated a definite alteration or addition, which may be made in all fire-engines, in such a way as to enable a workman to execute it ; and it seems to me that he has, for he has directed him to make a vessel for the condensation, distinct from that in which the powers of steam operate, and to convey the steam, as occasion requires, from the cylinder to the condensing vessel, to keep the cylinder hot by means distinctly described, and to extract by pumps the vapor which may impede the work ; therefore it seems to me that he has given distinct directions for the purpose. Whether those directions were or were not sufficient is not now a question for our decision ; it was a question for the determination of the jury, and they have decided it.

Judgment affirmed.

CARTWRIGHT v. AMATT.

Common Pleas, Nov. 18, 1799.

Assignment. Construction, as to Transfer of Title.

A, by indenture (reciting that a suit was depending between him and B respecting certain patents, and that the same could not be assigned without hazard of defeating the suit), granted absolutely the patents mentioned, together with some others, to C ; excepting, however, until the determination of the suit, such patents as should be necessary to support A's legal title. Then followed a covenant that A, upon the determination of the suit, should assign

the excepted patents to C, and that, until such assignment, A should stand legally possessed of the same. *Held*, that the legal interest in the excepted patents vested in C upon the determination of the suit, without assignment.

Rule to set aside a nonsuit in an action for infringement.

The declaration, after stating the grant of the letters patent to one Edmund Cartwright, the enrolment of the specification, etc., proceeded to aver that "the said Edmund Cartwright, afterward and before the committing the several grievances hereinafter mentioned, to wit, on etc., at etc., by a certain indenture then and there made between the said Edmund Cartwright of the first part, the plaintiffs of the second part, and certain other persons therein respectively mentioned and referred to, of the third and fourth parts (one part of which, etc.), did, for the considerations therein mentioned, grant, bargain, sell, assign, transfer and set over unto the plaintiffs, their executors, etc., the before-mentioned letters patent, etc., saving, excepting and reserving unto the said Edmund Cartwright, his executors and administrators, until the final determination and conclusion of a certain suit in the said indenture mentioned then depending, and now long since ended and concluded, such of the said letters patent in the said indenture mentioned as should be necessary to be given in evidence for the support of the said suit, and the legal right and interest of the said Edmund Cartwright in the same, to hold," etc.

The cause came on to be tried before Rooke, J., at the Guildhall sittings, after last Trinity Term, when, the deed of assignment being produced in evidence, it appeared from the recital that, as there was a suit depending between Edmund Cartwright, plaintiff, and William Toplis, defendant, respecting an infringement of certain letters patent, and until such suit had been legally tried, the legal right or property of the said Edmund Cartwright in such letters patent as related to the invention of combing wool and similar articles (which were the letters patent in question) could not, it was apprehended, be fully resigned or made over to the plaintiffs without hazard of defeating the said suit, it was agreed that in the mean time, and until such suit was

determined, Edmund Cartwright should continue legal owner of the patents, in trust for the plaintiffs, in whose custody they were to remain, and who were to have all the benefits arising from them. Then followed an absolute grant of the letters patent in question, together with others, to the plaintiffs, with the following exception: "save and except, nevertheless, and out of these presents reserving unto the said Edmund Cartwright, until the final determination or conclusion of the suit or action now depending between him, the said Edmund Cartwright, and the said William Toplis, all such of the said hereinbefore mentioned patents as are or shall be necessary to be given in evidence for the support of the said suit or action, and the legal right or interest of the said Edmund Cartwright in and to the same, upon the trusts," etc. After the trusts was inserted this covenant for further and better assigning the letters patent, "that when and so soon as the said suit or action now depending between the said Edmund Cartwright and the said William Toplis shall have been finally determined, he, the said Edmund Cartwright, shall forthwith thereafter well and effectually grant, assign and make over to the plaintiffs upon the trusts, etc., the said hereinbefore excepted grants or letters patent, touching or relating to the said inventions, and every or any other matters in contest, for which the same were reserved out of these presents, and the specifications thereof, and all his legal and other estate therein; and that in the mean time, and until such last-mentioned assignment thereof shall be made, and executed, he, the said Edmund Cartwright, shall and will stand legally possessed of and interested in the same reserved grants or letters patent for the behoof of them, the plaintiffs, their executors, etc., subject to the same trusts," etc. It was objected on the part of the defendants that, as no assignment had taken place subsequent to the determination of the depending suit, the legal interest, not being vested in the plaintiffs by the deed produced, still remained in Edmund Cartwright, and therefore the plaintiffs could not recover. The learned judge, being of that opinion, directed a nonsuit.

Runnington on a former day moved to set aside this nonsuit, and contended that it was the manifest intention of the parties that the whole legal interest should pass to the plaintiffs as soon as the suit which was depending should be determined, and that the last covenant, which was only inserted for greater caution, ought not to be allowed to defeat that intention. A rule *nisi* was accordingly granted.

ROOKE, J., said that on a further consideration of the effect of the deed than was given to it at *nisi prius*, he was convinced that the legal interest vested in the plaintiffs immediately on the determination of the suit that was depending at the time when the indenture was executed. And the rest of the court expressed themselves clearly of the same opinion.

Rule made absolute, without argument.

CARTWRIGHT v. EAMER.

This case is cited, and the substance of the decision stated, in *Harmer v. Plane* (*post*, pp. 170, 174). No materials for preparing a full report have been found.

Ex parte HOOPS.

Chancery, Jan. 22, 1802.

Enrolment. No Enlargement of Time.

Enrolment of a patent cannot be dispensed with for the purpose of preventing the specification being made public.

After a patent has passed, the time for enrolment cannot be enlarged without an act of Parliament.

A petition was presented by the patentee of an invention for making paper from straw, asking that the Chancellor would dispense with enrolment, or that some provision should be made to prevent the specification from being

made public ; suggesting the danger that foreigners might obtain copies of the specification in consequence of the enrolment.

Lord Chancellor ELDON. How can I do this ? Either upon this or some other case in the last session, a clause for this purpose was inserted in an act of Parliament ; and upon the motion of Lord Thurlow, upon reasons applying not only to that, but to all cases, and seconded by Lord Rosslyn, the clause was universally rejected ; and rejected, as it appeared to me, upon very substantial grounds, in which I readily concur. As to the worth of the apprehension suggested, a man has nothing more to do than to pirate your invention in a single instance, and he will then force you to bring an action ; and then the specification must be produced. But with regard to the king's subjects, a very strong objection occurs, which makes it necessary that the specification should be capable of being produced. They have a right to apply to the Patent Office to see the specification, that they may not throw away their time and labor, perhaps at a great expense, upon an invention upon which the patentee might afterward come with his specification, alleging an infringement of his patent ; when, if those persons had seen the specification, they never would have engaged in their project. The enrolment is, therefore, for the benefit of the public.

It was then desired that the time, which would expire on the 17th of the next month, might be enlarged, in order that the petitioner might apply to Parliament.

The LORD CHANCELLOR. I cannot do that if the patent has passed ; for the patent is void if the proviso is not complied with. You should have applied to the Attorney-General, before the patent passed, for a longer time upon the special circumstances. I cannot take the great seal from a patent, and repeal it in the most essential point. It is a legal grant, with a proviso for the benefit of all the king's subjects. You can do nothing except by an act of Parliament to enlarge the time mentioned in the proviso.

Petition dismissed.

TENNANT'S CASE.

King's Bench, N. P., Dec. 23, 1802.*Prior Use. Patentee not Sole Inventor.*

A patent is void if the patentee is not sole inventor.

Trial of an action for infringement.

The patent was granted to Charles Tennant, the plaintiff, for invention of a bleaching liquor.

The specification was as follows :

This invention consists in a new method of employing calcareous earth, either uncalcined or in the state of quicklime, for which may be substituted the earth properly called barytes, or that known by the name of strontites, or the earth magnesia, either in their carbonated or calcined forms, though more advantageously in the latter. As all these earths are equally applicable in this invention, it will be sufficient only to specify the way of employing calcareous earth ; it being the most abundant and easiest to be procured, will therefore be generally preferred. The calcareous earth (in whatever state of its varieties it is intended to be used, and which may be employed almost indiscriminately, although the purer the better), being calcined and reduced to the state of quicklime, in order to be employed to the greatest advantage, should be passed through a fine wire sieve ; which will be easily accomplished, if the lime has been previously slaked with a little water. Next, a proportion of this powdered lime is to be put into the receiver, or vessel in use by the bleacher for preparing his bleaching liquor, and where hitherto a solution of alkaline salts, such as pot and pearl ashes, etc., has been in general used to catch and retain the oxygenated muriatic acid gas ; my construction or form of which receiver, or of the apparatus in general, I do not condescend upon, that which is at present in general use answering perfectly well. When the ingredients put into the retort to procure this gas (whether manganese and common muriatic acid ; or manganese, com-

mon salt and oil of vitriol ; or, indeed, any other materials capable of yielding it) begin to give it out, then it is necessary to keep the liquor in the receiver which contains the quicklime in as constant a state of agitation as possible, so that the fine particles of the lime be diffused throughout the whole of the liquor in the receiver, for on this the success of the operation depends. I disclaim any right to the discovery of the simple chemical solution of lime in water, commonly called lime-water, for retaining and fixing the oxygenated muriatic acid gas, it having been long known that lime-water had some effect in this way ; but, from the quantity of lime that is soluble in water being so exceedingly small (only about a seven-hundredth part of its weight), no great benefit was found to be derived from it ; whereas, by this process of keeping the lime in a state of mechanical suspension, floating through every part of the fluid in the receiver, it greedily absorbs the oxygenated muriatic acid gas, forming instantly, as it does so, a soluble compound, which possesses in an equal or even superior degree the qualities of the bleaching liquor usually made by the help of an alkaline lixivium, having the very same whitening and detergent powers, as well as that most valuable one of not discharging dyed colors, but, on the contrary, preserving and enlivening them. I cannot take upon me to state the specific quantity of lime necessary to be put into the receiver for making a given quantity of bleaching liquor, as that must depend entirely upon the strength and other qualities the liquor is wanted to possess ; however, by use of the following proportion of ingredients, a very excellent and comparatively very cheap liquor will be obtained, to what can be procured by using an alkaline ley strong enough to absorb and retain the oxygenated muriatic acid gas producible from the same materials. In a receiver capable of containing one hundred and forty gallons, wine measure, dissolve thirty pounds of common salt, which appears useful only in giving an additional degree of specific gravity to the water, and by that means making it easier to keep the lime, to be afterward added, suspended ; and for which common salt, any other substance possessing a sim-

ilar power may be used, and which is itself by no means essentially necessary ; when this salt is dissolved, add sixty pounds of finely powdered quicklime, and into the retort of the apparatus put thirty pounds of manganese mixed up with thirty pounds of common salt, upon which pour thirty pounds of oil of vitriol, previously diluted with its bulk of water, and the usual precaution of luting the vessel well, etc., taken. When the gas begins to appear, the agitation of the lime and water in the receiver must commence, which should be continued by means of a wooden paddle or rake, of almost any construction, without intermission, until the materials are wrought off (after employing heat as usual), and will not yield any more oxygenated muriatic acid gas. Then the whole should be allowed to remain at rest for two or three hours, when the clear liquor in the receiver may be drawn off for use, and will be found to possess all the qualities before ascribed to it. Although I have mentioned the above proportions of materials for making bleaching liquor by my discovery, I think it necessary to declare that these are not the only ones that will be found to answer, as they may be varied with good effects almost *ad infinitum*, according to the purpose to which the liquor is to be applied. Also, that the spirit of my discovery consists in my having found out that the calcareous earth, and that called barytes, and that called strontites, either in their carbonated or calcined states, by being kept in a state of mechanical suspension in water or other watery fluid, are capable of uniting with the oxygenated muriatic acid gas, and forming a compound that can be used with great efficacy in bleaching ; and also that these earths, thus mechanically suspended, may be used advantageously in the other parts of the process of bleaching, where alkaline salts have been hitherto employed. From the far greater degree of solubility which the earths barytes and strontites possess in comparison to lime, I have discovered that a chemical solution of them may be used with very great effect in neutralizing the oxygenated muriatic acid, and in other processes of bleaching, instead of alkaline substances ; and that either the mechanical or chemical suspension of these earths may

be employed with great success, although the former will be attended with more than the latter.

Several witnesses were called in support of the patent, who testified to the great utility of the invention, and the general ignorance of the bleachers with respect to such bleaching liquor until after the date of Mr. Tennant's patent.

On the other side, a bleacher near Nottingham deposed that he had used the same means of preparing his bleaching liquor for five or six years anterior to the date of the patent. He also stated that he had kept his method a secret from all but his two partners, and two servants concerned in preparing it. A chemist at Glasgow deposed that, having had frequent conversations with Tennant on the means of improving bleaching liquor, he had in one of them suggested to Mr. Tennant that he would probably attain his end by keeping the lime-water constantly agitated, and that Tennant afterward informed the witness that this method had succeeded. These conversations took place in 1796, and Mr. Tennant obtained his patent in 1798.

Lord ELLENBOROUGH, C. J., declared this to be a scandalous patent, equally unfounded in law and justice.

The plaintiff was nonsuited on two grounds : 1. That the process had been used five or six years prior to the date of the patent, and therefore was not a new invention ; and, 2, That a chemist had suggested to Tennant the agitation of the lime-water, which was indispensable to the process, and therefore that it was not the invention of the patentee.

Commenting on Tennant's Case, Davies observes : " This invention being known before the patent to five different persons, it might perhaps also have been considered as both hurtful to trade and mischievous to the state ; hurtful to trade, as confining the use of an article to one person for fourteen years, which was before known to five who might, during that time, have disseminated it to the various persons engaged in that trade, if not prevented by the patent ; and injurious to the state, as by granting the exclusive benefit of a thing already used by or known to the public, the patentee could not pay for his privilege in the coin required by the patent, namely, a disclosure of a *new* invention, having nothing to give as a consideration for his monopoly." Dav. P. C. 430.

HARE v. HARFORD.

King's Bench, N. P., July 14, 1803.*Novelty of an Alleged Invention for Preserving the Essential Oil of Hops in Brewing.*

Trial of an action of covenant on a bond conditioned for payment of the consideration of a license.

A patent was obtained by Richard Hare, dated September 12, 1791, for an apparatus "whereby the essential oil of hops is preserved and applied to use during the process of boiling worts for beer."

Hare used his invention in an extensive brewery of which he was proprietor. He afterward sold this concern to Harford and Taylor, and as a part of the transaction received from them a bond conditioned for the payment of an annuity during the lifetime of the patent, in consideration of his licensing them to use the invention. They, however, found that S. T. Wood, before the date of the Hare patent, had made use of a method of brewing which was substantially the same as Hare's; they therefore refused to continue paying the annuity. Hence the present action, on the trial of which the chief question was whether Hare's invention was anticipated by Wood's.

The patent to Wood was dated August 20, 1784, for "new discoveries in the application of steam and also methods of using the water produced from condensed steam, and for applying the water from the coppers or boilers of steam-engines to other purposes than that of working the steam-engine, and also various methods of heating and applying water for the several purposes of breweries and distilleries, and for forwarding the process of brewing, and also certain methods of constructing and adapting coppers, boilers, tubes and other hollow bodies for the more effectual means of heating water and worts, and of rendering such coppers, boilers, tubes and other hollow bodies, as are employed in the breweries and distil-

leries, steam and air tight." Wood's specification did not speak in terms about preserving the essential oil of hops, but it was urged on behalf of the defendants that Wood's method could not be applied to brewers' worts without producing the same effect as Hare's ; and therefore that Hare's was destitute of novelty.

The plaintiff's witnesses explained his invention by means of a model consisting of a concave vessel, placed over the dome of the copper, in which vessel the liquor for the mashes was to be contained. From the centre of the dome proceeded a large perpendicular trunk provided with safety-valves on the top, from which trunk issued a horizontal tube having three smaller tubes suspended from it, whose extremities were immersed in the water in the concave vessel, so that all the steam which issued from the copper during the process of boiling worts must necessarily (except the pressure opened the safety-valves) pass into and through the liquor in the concave vessel. The steam thus combining with the water heated it very rapidly, and at the same time impregnated it strongly with the aroma of hops.

The witnesses described Wood's invention as a somewhat similar vessel, but the difference was that instead of the steam from his copper being mixed or brought into contact with the water in the concave vessel, it was carried off by a trunk and applied to work a steam-engine during the boiling of the worts. Counsel for plaintiff contended that this contrivance was essentially different from plaintiff's inasmuch as preserving the aroma or essential oil of hops was no part of Wood's purpose, while it was the primary object of Hare's ; also that with respect to heating the water, Hare's process was preferable in brewing.

Lord ALVANLEY, C. J., was proceeding to sum up the evidence when the jury, appearing throughout the trial to have inclined to the side of defendants, pronounced a verdict in defendants' favor.

Verdict for defendants.

HESSE v. STEVENSON.

Common Pleas, Nov. 28, 1803.

Effect of Assignment in Bankruptcy on Patent Right. Title.

Assignment in bankruptcy, by a patentee, carries his patent right.

An assignment (in bankruptcy) of shares in a patent right contained covenants by the assignor, 1, that he had good right, full power and lawful authority to assign and convey the said shares, and, 2, that he had not by any means directly or indirectly forfeited any right or authority he ever had, etc., over the same. *Held*, that the generality of the former words of the covenant is not restrained by the latter.

If the assignees of an uncertificated bankrupt in their own names execute a deed with other creditors, whereby they, and all the creditors who may sign the deed, release the bankrupt from all actions, suits, claims and demands against him or his estate, and such deed be not signed by all the creditors of the bankrupt, the assignees are not barred from claiming, as assignees, the benefit of a patent right previously obtained by the bankrupt.

A patent right obtained from the Crown by an uncertificated bankrupt is affected by the previous assignment of the commissioners, and rests in the assignees.

An act of Parliament empowering such bankrupt patentee, his executors, administrators and assigns, to assign the right to a greater number of persons than allowed by the letters patent, and declared to be a public act, does not enable either the bankrupt or his assigns to make a better title than they could before the act. The act thus authorizing the assignment is of a private nature; the only effect of declaring it to be public is to make it subject to judicial notice.

Verdict subject to the opinion of the court.

The action was covenant upon an assignment. On the trial, the jury found for the plaintiff subject to opinion upon a case of which the following is the substance:

In 1790 Koops was declared a bankrupt, and had not obtained his certificate. An act of Parliament, 41 Geo. III., was passed enabling Koops, his executors, administrators and assigns, to assign the benefit of the patent to any number of persons not exceeding sixty, which act is declared to be a public act. On September 9, 1801, Koops's creditors executed a deed accepting a proposition for a settlement which the bankrupt had made to pay in instalments, authorizing his assignees to carry the same into effect; and on receipt of the first instalment, and on specified security being

given for the payment of the subsequent ones, the creditors and assignees undertook to execute releases to said Koops, and to give him assistance in superseding the commission of bankruptcy. Three of the creditors who had proved debts to the amount of about £600 never executed such deed. Koops paid the first instalment; but failing to pay the subsequent instalments, he lodged certain securities in the hands of the assignees, the produce of which has since been received by the assignees, for the benefit of the creditors; and the remainder not having been satisfied by Koops, the assignees entered judgment against him, and on October 14, 1802, issued a fieri facias thereon against his effects and entered upon the premises where the manufactory under the said letters patent and act of Parliament was carried on, and took possession of the same, and the effects therein under the said execution, and still continue to keep possession thereof. On these facts the question was, whether the plaintiff was entitled to recover. If so, the verdict was to stand; if not, to be entered for the defendant.

The arguments of counsel did not involve principles of patent law, but turned upon the question of the assignability in bankruptcy of a patent and the legal effect of the covenants.

LORD ALVANLEY, C. J. The question in this case arises upon a deed-poll, dated January 5, 1802, by which the defendant gives and grants to the plaintiff a share in his patent right. The deed is not stated at length upon the record, but we consider the case as if the whole deed were now before us, because the covenants contained in that deed, which are not set forth, are not at variance with the covenant upon which the breach is assigned. The covenant upon which the question immediately arises is, that the defendant had good right, full power, and absolute and lawful authority to convey; and that he had not by any means, directly or indirectly, forfeited any right or authority he ever had, or might have had, over the property in question. This action arises upon the first part of the covenant, and

the breach assigned is, that the defendant had not good right, full power, and absolute and lawful authority to convey. We are called upon to decide upon the true construction of this covenant. It has been contended, upon the authority chiefly of *Browning v. Wright* (2 Bos. & P. 13), that this does not amount to an absolute covenant for good title, but must be confined to the acts of the party himself. We have looked with great attention into that case; and after the very able manner in which the principles which govern the construction of covenants were then laid down by Lord Eldon and the other judges, it is unnecessary for me to enter at any length into the subject. Almost every case which bears upon the point is there cited; and, indeed, I find more of them there stated than I expected, for I did not think that the courts had formerly been so liberal in the construction of covenants as it appears that they have been. I have examined all these cases, but I do not think it necessary to state them; for we not only agree with the principles laid down in *Browning v. Wright*, but we think that the case might have been decided as it was upon the very words of the covenant, which was restrained to the acts of the party himself by the introductory words, "notwithstanding anything by him done to the contrary;" and so Lord Eldon thought, though he adds that if such were not the construction of the covenant itself, yet being coupled with the other covenant which was so restrained, it must be construed in the same manner. The defendant having covenanted that "for and notwithstanding anything by him done to the contrary," he was seized in fee, and that he had good right to convey, the latter part of the covenant, coupled as it was with the former part by the words, "and that," must necessarily be overridden by the introductory words, "for and notwithstanding anything by him done to the contrary;" and this appears to have been the opinion of the whole court. But taking the latter covenant not to be restrained in terms, they proceeded to consider the rules by which covenants of this description are to be construed. From all the cases upon this subject, it appears to be determined that, however general the words of a cov-

enant may be if standing alone, yet if from other covenants in the same deed it is plainly and irresistibly to be inferred that the party could not have intended to use the words in the general sense which they import, the court will limit the operation of the general words. The question, therefore, always has been whether such an irresistible inference does arise. For if such an inference does arise from concomitant covenants, they will control the general words of an independent covenant in the same deed. In Lord Eldon's judgment, one case is mentioned which I think deserves some notice, because his lordship seemed to suppose that the judgment of the court proceeded upon the mere legal construction of the deed, without regard to any circumstances *dehors* the deed. The case to which I allude is *Fielder v. Studley* (Finch. 90), which appears to me to be an extremely strong case in favor of the present plaintiff, if the general covenant, which was restrained by the other special covenants, be considered as an independent covenant. Lord Eldon observes that the court must have proceeded "on the ground of the intent of the parties appearing on the instrument; since that intent, and the consequent legal effect of the instrument, could only be collected from the instrument itself, and not from anything *dehors*." It must be remembered, however, that the application there was made to the Court of Chancery upon equitable as well as legal grounds; for, on looking into the case, I find that the defendant's father, in 1657, had sold lands belonging to the Dean and Chapter of Sarum, which had been dissolved during the Commonwealth. It was not very likely, therefore, that a party selling under these circumstances would covenant for anything more than his own acts. It appearing that the general covenant was manifestly contrary to the true intent of the parties, application was made to the Court of Chancery to correct the mistake, in the same manner as applications are made to that court to correct mistakes in marriage articles where clauses are inserted contrary to the intent of the parties. The decision, therefore, did not merely proceed upon the construction of a legal instrument, but the circumstances entitled the party to have

the covenant rectified, as having gone beyond the intention of the parties. But supposing that case to have been decided as a question at law, the question here is whether the principle I have here stated, applied to this case, requires the court to restrain the general words of the covenant sued upon. If the inference be irresistible that the parties could not intend to make a general covenant, we are bound to give the defendant the benefit of that inference. The property assigned is a share in a patent right; and it could not be unknown to the defendant that Koops, the original proprietor, had been a bankrupt, though possibly the plaintiff might be ignorant of that circumstance. I have looked anxiously through all the concomitant covenants, in order to ascertain whether they afforded any inference of an intention to restrain the covenant in question, but I find none. The deed, after reciting the manner in which the property came to Koops ten years before, and the assignment to Stevenson, contains a conveyance of his interest to the plaintiff; and then follows the warranty in question, which, instead of being framed in the usual and almost daily words, where parties intend to be bound by their own acts only, viz., "for and notwithstanding any act by him done to the contrary," omits them altogether; besides which the defendant covenants that the assignee shall enjoy the property assigned in as ample a manner as the assignor. The omission of these words is almost of itself decisive. The attention of the purchaser is not called by any words to the intent of the vendor to confine his covenant to his own acts. The covenant that the defendant has paid all the calls is certainly personal, but the covenant for title is general; and the court ought not to indulge parties in leaving out words which are ordinarily introduced, and by which the real meaning of the parties might be plainly understood. The argument on the part of the defendant arises from the latter part of the covenant in question. If the party meant to covenant for an absolute right to convey, why, it is asked, does he covenant that he has not forfeited such right? To this it may be answered that the latter stipulation, though unnecessary, is not inconsistent with the former. The rule

of construction adopted in *Browning v. Wright* has never been carried to such a length as to decide that because some clauses are introduced into a deed which do not add to the security provided by other clauses, the security so provided is to be restrained. We are, therefore, of opinion that the covenant for absolute right to convey is not restrained by the other parts of the deed. It is contended, however, that the defendant has conveyed a good title to the plaintiff; and, first, it is said that admitting the interest in the patent right to have passed under the assignment of the commissioners, yet the assignees have reconveyed to the bankrupt the whole of their interest therein by the deed of September 9, 1801. It must be remembered, however, that nothing short of an actual conveyance by the assignees can sustain that argument, and that a mere release will not be sufficient; and it was, therefore, insisted that the deed amounted to a conveyance. But I have no hesitation in saying that the deed alluded to was neither intended to convey, nor did it operate in law as a conveyance. By that deed, the two persons who were the assignees of Koops, together with his several other creditors parties thereto, in consideration of his having agreed to pay them 15*s.* in the pound, and to secure the debts of the foreign creditors after the same rate, did remise, release and quitclaim to him all actions, suits, claims and demands whatsoever; but it is to be observed that the persons who were assignees did not convey as such. Indeed, if they acted as assignees, why was it necessary that the other creditors should join? And they do not pretend to bind the other creditors who were not parties to the deed. This is the deed which is said to convey to Koops, as a purchaser, all the interest of the assignees, and to make him a new man. But the words are not sufficient for that purpose; it could not have been the intention of the parties. The assignees do not affect to convey for any persons not parties to the deed; and the instalments have not been paid according to the agreement. We are, therefore, clearly of opinion that it is impossible to construe this deed to be such a conveyance as has been contended for on the part of the defendant. With respect to

the supposed power of the assignees to make such a compromise with the bankrupt as that stated in the case, and the attempt to show that it amounts to a sale of the property to him ; it was not competent to assignees to make such compromise, unless the other creditors had consented ; nor could the transaction be deemed a sale under the usual powers. Next, it is contended that the nature of the property in this patent was such that it did not pass under the assignment ; and several cases were cited in support of this proposition. It is said that although by the assignment every right and interest, and every right of action, as well as right of possession and possibility of interest, is taken out of the bankrupt and vested in the assignees, yet that the fruits of a man's own invention do not pass. It is true that the schemes which a man may have in his own head before he obtains his certificate, or the fruits which he may make of such schemes, do not pass, nor could the assignees require him to assign them over, provided he does not carry them into effect until after he has obtained his certificate. But if he avail himself of his knowledge and skill and thereby acquire a beneficial interest, which may be the subject of assignment, I cannot frame to myself an argument why that interest should not pass in the same manner as any other property acquired by his personal industry. Can there be any doubt that if a bankrupt acquire a large sum of money, and lay it out in land, that the assignees may claim it ? They cannot, indeed, take the profits of his daily labor. He must live. But if he accumulate any large sum, it cannot be denied that the assignees are at liberty to demand it ; though until they do so, it does not lie in the mouth of strangers to defeat an action at his suit in respect of such property by setting up his bankruptcy. We are, therefore, clearly of opinion that the interest in the letters patent was an interest of such a nature as to be the subject of assignment by the commissioners.

Lastly, it is contended that the act of Parliament stated in the case vested a legal interest in Kooops, for that he must be taken against all the world to have that interest which the act of Parliament recites to be vested in him,

that act being a public act. But though the act be public, it is of a private nature. The only object of the proviso for making it a public act is, that it may be judicially taken notice of, instead of being specially pleaded, and to save the expense of proving an attested copy. But it never has been held that an act of a private nature derives any additional weight or authority from such a proviso; it only affects Koops and those claiming under him, and authorizes him to do certain acts which by the letters patent he could not have done. It recites the letters patent, containing a clause which prevents him from assigning to more than five persons, and then enables him to assign to any number of persons not exceeding sixty. It is not possible, then, to consider this act as giving any title to Koops which he had not at the time when it passed. Such has been the construction which has always been put upon acts of Parliament of this nature. We are, therefore, of opinion that no aid is to be derived to the defendant from that act of Parliament.

Judgment for plaintiff.

HUDDART v. GRIMSHAW.

King's Bench, N. P., Dec. 23, 1803.

New Combination. Sufficiency of Specification. Evidence of Infringement.

If, prior to the time of granting, a patent is communicated to the public in the shape of a specification of another patent or otherwise becomes known to the public, this avoids the patent subsequently granted.

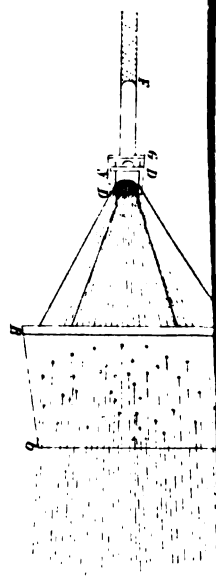
The test of the sufficiency of a specification is whether it explains the invention to artisans skilled in the subject.

The insertion in a specification of unnecessary matters, or of anything as important which is not so, will vitiate.

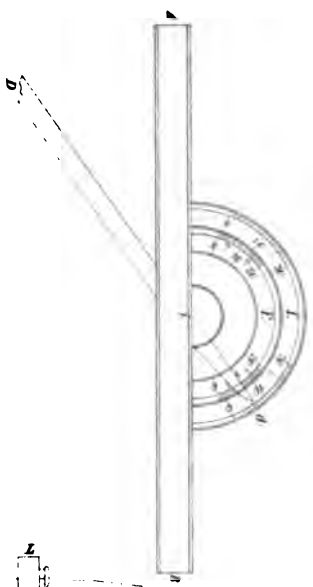
There may be several patents for several different means of effecting the same general purpose.

The application of a bobbin with a spring attached,—*Held*, a material part of an invention for making rope.

No. I.

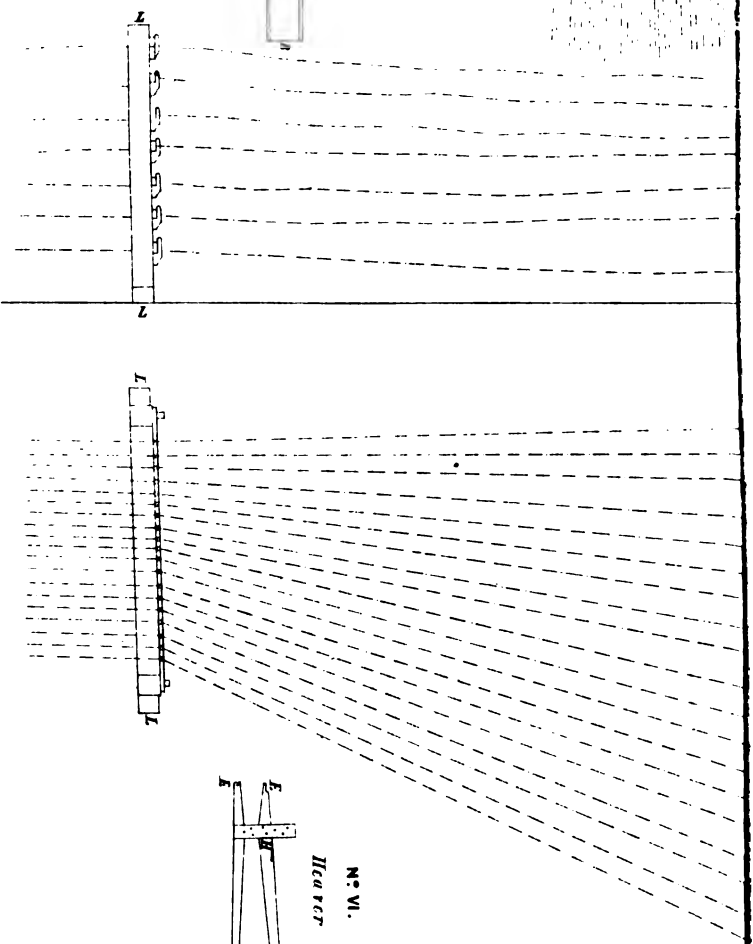


No. V. Register gauge.

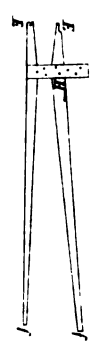


No. III.

FIG. 1st



No. VI.
 Director



The method drawing is ordered

Huddart's New Mode or Art of Making Great Cables and other Cordage.

No. 1, a spindle and bobbin, in which A, B, represents the spindle; C, D, the bobbin (with the yarn upon it from c to D); E, F, the axis which carries the spindle a; G, H, an arm of wood fixed upon the square part of the spindle, and which goes round with it, part of which G, H, may be of wire, with a hole at H, or a friction wheel or pulley to receive the rope yarn, which from thence is to be led through a hole in the end of the spindle at B. At K a spring is fixed to the wooden arm by means of a screw and nails or otherwise; the screw works * the square part of the spindle, by means of which the spring may be made stronger or weaker as requisite, the other end of which, resting upon the globular part of the head of the bobbin formed for that purpose to regulate the tension of the yarn in drawing it from the bobbin whilst the spindle is turning in, registering the strand. This spindle and bobbin is carried by the axis E, F. the smaller end of the spindle A is square or triangular, and fits into the end of the axis at E, which axis is carried by a band going round the pulley (or pinion if carried by a wheel with teeth) at e, f. The spindle and bobbin is easily shifted by lifting the end at B out of the notch which it runs in, and drawing it off the axis at E. No. 2, another spindle and bobbin, in which I, L, M, N, O, K, represent a spindle continued into a square frame of iron to revolve upon the pivots I, K. The pivot at I is perforated in order to receive the rope yarn from the bobbin which runs at right angle to I, K, upon the spindle or axis P, Q. This bobbin is adjusted by a screw in the same manner as the first mentioned, or by two springs and screws, x & y, one at the head P, and the other at Q, having two globular or nearly parallel parts at each end of the bobbin for that purpose. The bobbin is soon shifted by taking out the spindle P, Q, which is done by shoving it towards P, against the spring p, P, till the end at Q in the square frame is relieved; the spring p, P, is to keep the spindle in its place while the whole is carried round upon the pivots I, K, by tooth and pinion or band round the pulley R, S, and at the same time supplied the yarn as before mentioned whilst the strand is registering. No. 3, the machine which carries the spindle in horizontal ranges, and ought to be constructed according to the size of the largest ropes the manufacturer has occasion to make. Figure 1 represents an elevation or section whose plane is perpendicular to the axis and spindles and the circles projected thereon, the large end of the bobbins which are placed in horizontal ranges, each range supported upon the horizontal railing and rise higher, front towards the back part of the machine. No. III., Figure 2, represents a profile or a section parallel to the axis of the spindles, and perpendicular to the horizon. No. III., Figure 3d, the horizontal plane, which is also parallel to the axis of the spindles. In these three Figures the same letters are used in each to denote the same part of the machinery; the number of spindles to be employed in this machine may be increased or diminished as occasion may require.

The base of this machine consists of three pieces of timber to lay upon the ground, or near it, mark't A in Figure 1, and A, a, in Figure 2d and 3d; and at right angles to these are bolted two pieces B, b., over the ends of the former, and a third may be added midway between if necessary, to secure the whole, and must extend over the piece A, a, on one side a convenient length to receive the pillars which support the long axis, &c., Figure 3d, which long axis when turned by the handle G gives motion to all the spindles by the communication of a band to every range of spindles. In this machine there is allowed one foot of room for the diameter of the bobbin, and eighteen inches for the length of the spindle marked y; the spindles are carried by an axis marked x, (as represented in spindle and bobbin No. 1) and will therefore require three rails or ranges of boards for each range of spindles, two of which support the pivots of the axis x, and are marked D, d, No. III., Figure 1st, and the third the front end of the spindle, in which there is a notch to drop the spindle into when the bobbin is shifted; those are supported by the pillars E, e, No. III., Figure 2d; each range is fixed higher than the one before it, and it is also necessary to have a rail F for each range, to lead the yarns clear of the foremost bobbins, which rail has a notch cut in it for each yarn to lead through; upon the long axes, &c., which is carried by the handle G, are as many pulleys as there are ranges of spindles. In this Drawing they are seven in number, and are marked K; the band going round these pulleys passes over the friction wheel H, and thence round every pulley in that particular range, and over the friction wheel h, and returns again into itself at the pulley K, which with the pulleys upon that range must be equal in diameter, in order that one turn of the handle may give one turn to each spindle, and the same must be attended to in every range. The machinery for the spindle and bobbin No. 2 differs from that of No. 1, in this respect only, that it is necessary to allow more room in the breadth for each bobbin, and consequently there will be fewer bobbins in each range when the breadth of the machine is the same. The machine will require but two rails to support the spindles, as they require no separate axis to carry them, the pulley being fast to the spindle, and always remaining in the machine, for the small iron rod only which the bobbin runs upon is taken out to shift the bobbin. In these machines there is a space left between the first and second, the third and fifth, and the sixth and seventh ranges of spindles as mark'd M, in No. III. Figure 2d and 3d, and to allow a person to pass between, and shift or replace any particular bobbin that may have the yarn expended; and it is also to be observed, that those machines may have the spindles carried by wheels and pinions instead of bands and pulleys, if required. I have represented in No. III. Figure 2, the yarn from each of the seven ranges of spindles passing over the rail F, and from thence to the posts marked L, in which there are as many rails as ranges of spindles. There are cleats upon each post to support the rails, and each rail has as many notches in the upper side as there are spindles in a range. I have represented one of those rails, No. III.,

Figure 3, and the yarns leading from the front range of spindles. This railing may be either in the middle of the ground or carried along one side as in the No. III., Figure 3d, the distance between them such as may be thought necessary for supporting the yarns and keeping them separate the whole length of the strand, and may be made of various constructions, No. * (a), rails will be intelligible upon inspection of the Drawing, where B, b, represent the rails. The register is calculated to form the strand into shells of yarns, and therefore they must be made of different sizes, and with more or fewer holes, according to the intended size of the cable or rope. In the Drawing No. IV., marked Register, the front A, a, B, b, made of wood, perforated with circular ranges of holes, which may be about two inches asunder, through which all the yarns in the strand are to pass, and this brings them into a proper form to go through a smaller and similar plate, D, D, having in it as many holes a, A, a, B, b. This plate may be made of wood or metal, the plane of the front of which must be parallel to A, a, B, b, and fastened to it by three or four bars of wood or iron; the holes in D, D, must be so near together at the side next F, as only just to free them clear of each other, and if made of wood bored diagonally to extend further asunder towards A, a, B, b, except the center hole, which must be perpendicular to the center hole in A, a, B, b; this disposition of the yarns is necessary previous to their passing through the cylindrical tube of metal in which the strand is compressed and formed. This tube compressing the yarns and confining the outer shell to its proper figure, which outer shell compressed the next, and so on to the center, there cannot be any crossing of yarns or change in situation, but the whole strand formed close and compact, and no more yarn required from the bobbins than is necessary, according to the situation of the shells or their distance from the center. The tube is made in two parts longitudinally of thin steel, of a spring temper, marked F, (No. IV.) and is secured to D, D, by a plate of metal G, g, and three or four bars or rods, with screws to adjust it, and give it the best position. The cylinder has a projection at the fore end, which is larger than a hole in G, g, to receive the tube, and therefore brings it forward in registering the strand; and the plate G, g, is also made in two parts, by which means both the plate and the tube may be taken from the strand and applied to it again, or repaired, if it should happen to be broken during the operation; each part of the tube marked F is more than a semi-circle of the size of the strand which is to be registered, in order that the thin edges may overlay each other, and being a spring temper is compressible by a wire or thong going round it several times, and fastened to the jaws of a heaver, marked No. VI., E, E, F, in which E, E, represent the jaws to which the thong or wire is made fast, and move between the cheeks upon the bolt at H, which may be set further asunder by shifting the bolt at H, so as to have the handle F at a proper distance for the man who registers to lay hold off; and by this heaver compressing the tube by a constant force, the tube will expend or contract, in case the general rim of the yarns be thicker or smaller in

different parts of the strand, and will form, as was said before, a compact strand and free from hollows, which might otherwise be occasioned by crossing of yarns over each other. N, V, register gauge. It is as follows: A, B, is the stock or thick part of the gauge, in which there is a groove or slit for the tongue and index D, *d*, to move in. Upon the centre *i*, on the side *d*, is fixed to the stock A, B, a semicircle, upon which are two graduated arcs of circles concentric with *i*, one of which is marked L (laying), the other R (registering); those two arcs are graduated, answering to the mean stretching of the yarns, founded upon experiments. To use it, the stock of the gauge must be applied to the side of the strand parallel to the axis, and the tongue to lay over parallel to that part of the shell of outside yarns where it touches the strand, which shews the angle made by the outside shells of yarns, and a line on the surface parallel to the center of the strand, and the corresponding graduation must be used in registering and when the strands are laid into a rope.

Having described the various parts of the machinery and implements to be used, I shall now enter upon the operation:—The bobbins being all wound full of yarn, which may be done by a machine to fix them upon, with a handle to it) and put upon the spindles, and the ends of the yarns led through the holes H, and ends of the spindles, B, Figure No. 1, the end of the spindle A is put into the end E of the axis (which always remains ready for use), and the fore end of the spindle B dropped into the notch in the rail; then draw off some yarn, and regulate the springs, if wanted, till an equal force and sufficiently tight, draw off the yarns, leaving the yarn from the bobbin long enough to reach the fore part of the machine, where it is to be knotted to the yarns of the strand; having fixed as many bobbins as intended yarns in the strand, or in the three strands if the machine will carry so many, for though I shall only speak of registering one strand, yet the three strands may be registered all at the same time, the bands (if bands are used, and not wheel-work) should also be made tight to carry the axes, which is done by a screw, *d*, adjusting the friction wheel H; the strand is then to be run and laid upon the rails or supporters, each yarn in its proper notch; and, for expedition, one of the rails may be used for separating the yarns and laying them in the rails, dropping a whole range into the notches at once, which being done, the yarns of the strand are to be smooth knotted to the respective yarns from the bobbins, and the machine is ready for use. The yarns at the other end of the strand are then to be put through the register, taking off the tube and plate, if not already done; it is best to take the centre yarn from the railing or middle yarn of the middle rail, which put through the center hole of the register, & then select the yarns from the railing, to lead clear of each other when stretched to the holes in the register; the holes in the register being completed with yarns, let the ends be collected together upon a stretch, and made fast to the hook which turns the strand in registering, and slide the register back near to the hook, if not so before; then put on the tube and plate, and adjust it by the screws when

upon the strand. Lastly, put round the tube the thong or wire, and make it fast to the jaws of the heaver, and heave it right. If the handles of the heaver are too near or too far from each other for the convenience of the man that registers the strand after the bolt till it is right, and all is ready to begin to register the strand, the foreman having determined how hard he will lay the rope, suppose No. 10, in the register gauge—fix the index (*d*) of the gauge to 10 on the arc R, and taking a few turns with the hook (keeping the heaver tight to compress the tube), try the gauge and regulate the registering according to, as it is found to vary, till the outside yarns correspond with the tongue D of the gauge, and make the required angle; and which may be repeated as often as it is thought necessary, through the registering of the strand. If the three strands are registering together, it must be a triple register in one frame, and there is no necessity to try but one strand with the gauge, if the yarns are of the same kind. The three strands (or four if a four-strand rope) being registered, must be made fast to the hooks in the common way, equally tight for laying, the index of the gauge being altered from 10 on the arc R to 10 on the arc L; or whatever the number was intended to be, the corresponding numbers must be used; then turning the hooks of the strands till the outside shell of the yarns correspond with the tongue of the gauge, and begin to lay the rope. It is to be understood that in registering, a sufficient weight is laid upon the hook to prevent its being drawn towards the machine.

The substitution of a tube for a ring as a means of securing the yarn used in the process of making rope,—*Held*, a material improvement and patentable.

Trial of an action for infringement.

The patent in question was granted to the plaintiff, Joseph Huddart, dated April 25, 1793, for a new mode of making great cables and other cordage. See the specification and drawing.

The specification of the patent granted to Belfour, and mentioned in the judge's charge, was as follows: "The effect intended to be produced by the machine invented by me, and for which this patent is taken out, is to improve the manufacture of ropes and cordage, by making every yarn employed in the composition thereof bear its proper and equal proportion of the stress. In order to do this it is necessary that every yarn should, at the time of its being twisted into the rope, be kept tight, to prevent its being squeezed or puckered up into the inside of the strand, as is too much the case in ropes made upon the old principle; and to keep them thus tight, in the operation intended by this machinery, every yarn is to be wound upon a separate reel, which reel is so constructed as not to yield or render out the yarn wound upon it until such yarn is, in the operation of twisting, called forth to contribute its assistance and proportion in forming the strand. This is the end proposed to be answered by all the machinery mentioned in this specification, in which all the other parts are subordinate to the great machine represented in the drawing annexed, and marked with the letter A (Plate IX., fig. 1, and Plate X.), which letter is fixed upon the upper rail of the great frame of the machine. A great part of the effect intended to be produced consists in winding the yarns regularly upon the reels, and to that end a considerable part of the machinery hereafter described is particularly applied, because, when the yarns are so wound on the reels, those reels will yield or deliver the yarns off the great machine, A, then standing still. This machine or frame contains the reels, marked B, on one of which reels a part of every rope-yarn is to be wound, the other ends of such yarn being fast-

ened to the winch or handle that twists the strands. This frame may be made larger or smaller, according to the quantity of reels intended to be placed in it, which quantity of reels depends on the will of the manufacturer, agreeable to the size of the rope intended to be made, as each rope-yarn must have a separate reel for itself. I have found it necessary, in making one strand of a twenty-two-inch cable, to have the frame made very strong, of oak timber six inches square, to enable it to counteract the great strain it has to bear during the twisting of such a strand ; and, for the convenience of moving the frame, four rollers should be inserted, two under each side of the bottom of the frame, for it to move on ; which rollers may be made of wood or metal, and should be proportionate in size and strength to the dimensions of the frame itself. On the fore part of the frame there is to be placed, as appears in the drawing, a grate-work of wood and iron, marked c, which moves from side to side on two rollers, marked d, which are fixed in the lower part of the great frame, A ; and the grate-work is guided on the top by two rollers, also marked d, fixed in the upper part of the great frame, A. The use of this grate-work is to lead or guide the yarns to the separate reels on which they are to be wound, and to prevent the yarns from getting between the reels, and also to fill the reels with yarns properly from side to side. To produce these effects, this grate-work is moved backward and forward by a great wheel fixed on the right side of the great frame, A, reckoning when a person stands with his back to the frame, and which wheel is marked e. This wheel is of a singular construction, and may be made of brass, iron or any other hard metal, as is hereafter more fully described. This wheel is turned by one of the spindles on which the annexed drawing is made, the wheel is turned by the seventh spindle from the bottom, marked f, and that spindle is also turned by the general handle, g, which handle, at the same time, turns all or as many of the spindles hereafter described as the manufacturer chooses to set in motion, according to the size of the rope he intends to make. The number of reels which I have used in making one strand, or one ninth part,

of a twenty-two-inch cable, has been 297; which I have placed in the great frame, A, on eleven spindles, each spindle containing twenty-seven reels, and the height of the great frame, A, thus filled with 297 reels, will be seven feet six inches, and the breadth eleven feet. Where a great number of spindles are introduced, the size of the frame must be increased in proportion. The spindles on which the reels are fixed (four of which spindles are marked H) are made of round iron bars, of an inch and a quarter in diameter, and in length according to the size of the great frame, A. They are inserted, at the farthest or right-hand end, into the great frame, A, and pass through the frame at the other or left hand, reckoning as aforesaid, into a plate of iron as represented in the drawing, and marked I; to each spindle is fixed a small handle, marked K, which handle serves to turn the spindles round, for the purpose of turning the reels on which the yarns are wound. These spindles should be made of iron; the reels upon which the yarns are wound may be made of wood, iron, brass or other metal, but I have found them best and most durable as follows: The barrel of the reel should be of wood, turned, and should be in length four inches and in diameter three inches; a hole must be bored through the centre sufficiently large for the spindles, marked F, to go through, so that the reel may turn round easily on the spindles; and on each end of the barrel of the reel, to form the two ends of each reel, an iron plate should be fixed, about one eighth of an inch thick and six inches in diameter, so as to make the height of the ends of the reels six inches. In order that the reels, after a sufficient quantity of yarn is wound upon them, may be confined to their own spindles, so as neither to be fixed too fast nor moved too easily, I have introduced four springs into each reel, which springs are marked L (Plate IX., fig. 2), and should be made of iron or steel, about two inches and a half in length, one quarter of an inch in breadth, and one eighth of an inch thick in the middle, and smaller toward each end. Two of these springs are fixed into each end of the barrel of the said reel in the inside; one end of each spring is fixed fast into the barrel

of the reel, the other end is movable, and is governed by a screw, marked *m*, which, by being turned toward the right, closes the two ends, and thereby fixes the reel faster to the spindle, or, being turned the other way, opens the two ends, thereby allowing the reel to move more freely. A drawing of the inside of one of the ends of one of the reels is included among the drawings annexed. At the distance of four inches from the right-hand end of each spindle, reckoning as aforesaid, and of nine inches from the left, upon each spindle is placed a screw-nut, for the purpose of screwing all the reels on their spindles close together, or giving them greater liberty, and also for keeping the reels in their proper places; and, to give effect to these nuts, each end of each spindle must be made wormed, so as to articulate with the screw or worm in the inside of each nut. The nuts are described by the letter *o*, and may be made of iron, brass or other hard metal, but I have found those of brass the best; they should be made in the shape of (a cross) and about four inches diameter, so as to be moved by the hand, without a key, or any other instrument. To prevent the spindles from bending, or breaking, or giving way, during the operation of twisting the strand, I have fixed the standard, *p*, which should stand perpendicularly, and as near as possible in the middle of the great frame, *A*, and be fastened into the upper and lower parts of the great frame, *A*. This standard should have holes in it, at proper distances, sufficiently large for each spindle to go through, which standard I recommend to be made of iron, three inches broad and half an inch thick, placed edgeways as near in the centre of the machine as can be; its height, of course, must depend on the height of the great frame, *A*. It should be inserted into the top and bottom rails of the great frame, or fixed by nails or screws, or in any other manner the manufacturer chooses, so as to make it fast. To prevent the wheels from carrying each other round, there should be placed between every two reels, upon the spindle, a round piece of brass with a hole through it, so large as to let it pass freely round the spindle without being confined to it, three inches in diameter, one eighth of an inch thick at that part which is

nearest the spindle, and reduced gradually smaller, to about half its thickness, at the other edges ; this piece may be made of iron, or any other hard metal, but I am of opinion brass will answer the purpose best. The handles described by the letter *k*, which are fixed on those ends of the spindles that come through the great frame, *A*, for the purpose of turning the spindles round, are made of iron, about ten inches long, and a little curved outward, that they may pass each other ; and each handle may be turned separately, or all together, by the iron plate, *i*, through which plate are holes, sufficiently large to receive the end of each handle, and which plate may be taken off or kept on at pleasure, by removing the screws which fix it to the upper and lower of the smaller handles, *k*, which screws may be made of iron or any other hard metal. The handles, *k*, should be about half an inch in diameter, and may be made either round or square ; and at that end of the handle where the spindle is introduced, a square or other hole must be made for the spindle to go through, which may be fastened by a pin or screw, or riveted. The plate, *i*, through which the ends of the small handles, *k*, pass, should be made of iron, and be about one inch and a half broad, and a quarter of an inch thick ; its length must depend upon the number of spindles there are to be turned by it. The smaller handles, marked *k*, may be made in the form of the handle of a corn or coffee mill. The size of the frame, in which the grate-work of wood and iron, marked *c*, is fixed, must depend on the size of the great frame, *A* ; it should stand perpendicular, and its breadth and height must be less than the breadth and height of the frame, *A*, because it must move backward and forward in the front of the frame, *A*, and it should be less in breadth than the breadth of the inside, or clear of the frame, *A*, by the length of one of the reels ; and lower than the clear of the height of the frame, *A*, so as to work freely upon and under the four rollers before described. The frame of the grate-work, *c*, should be made of oak wood, about three inches square ; from the top to the bottom of this frame, in a perpendicular direction, should be fixed as many upright bars of iron as there are reels on each

spindle. These upright bars are marked *q*, and should be distant from each other about three inches ; they should be about an inch broad, one quarter of an inch thick, and stand with their flat sides toward the reels, being fixed to the frame, *c*, by nails or screws ; through which bars must be as many holes proportioned on each bar, according to the whole number of reels on the machine, the lower part of which holes must be level with the upper part of the barrel of the reel, and as large in height as the sides of the reels are from the upper part of the barrel to the edge of the plate at the end of the reel, and sufficiently large in breadth to admit a common rope-yarn to pass through them with a rough knot upon it. In order to confine these bars in proper places, it is necessary to have two or more cross-bars of wood or metal, marked *r*, which may be made stronger or weaker according to the size of the machine ; I have found them sufficient when made of oak wood three inches square. The rollers, *d*, on which the frame or grate-work, *c*, moves at the bottom, and which keep it in its place at the top, may be made of wood or metal, and should be fixed on pins to the great frame, *A*, having grooves in the centre, which fit on the upper and lower part of the frame, *c* ; and on the right-hand side of the said frame is fixed a connecting iron, marked *s*, for the purpose of communicating to the frame, *c*, the motion given by the wheel, *E* ; which iron, *s*, must be fastened to the frame of the grate-work, *c*, at about one third of the height from the bottom on the right-hand side, so as to connect it with the wheel, *E*. The length of the iron, *s*, from the side of the frame, *c*, on which it is to be fixed, should be about twelve inches, and one inch square, having on the back part of it, toward the wheel, *E*, two projecting arms about three inches in length, one at the end and the other near the centre ; on these two arms the side plates, *t*, which are fixed on the great wheel, *E*, operate as the wheel, *E*, goes round, thereby giving the grate-work the necessary motion to slide the frame, *c*, from right to left, and back again, in order to fill the reels with yarns equally, as before mentioned. The plates, marked *t*, on each side of the great wheel, *E*, should

be made of iron or steel, and should be fixed upon the great wheel, E, about one inch within its circumference ; their thickness should be about half an inch, their breadth, in the broadest part, should be equal to the length of the body of one of the reels on which the yarns are wound, tapering gradually toward each end till they become level with the surface of the great wheel, E, on which they are fixed ; their length must depend on the size of the great wheel, E, which is to be regulated by the magnitude of the machine. On a machine, capable of containing the quantity of reels sufficient for making one strand of a twenty-two-inch cable, the great wheel, E, should be two feet in diameter and about half an inch thick, which wheel should be of iron, and it may be either open or solid on its circumference ; it must be divided into teeth, at distances proper for receiving those fixed on the end of the seventh spindle from the bottom before mentioned, which protrudes through the end of the frame, A, to act upon the great wheel, E, so that it may receive motion sufficient to cause the grate-work, c, to move from side to side a space equal to the thickness of a common rope-yarn each time the reels on which the yarns are wound go once round ; by which means the reels can be properly filled, and consequently the reels need not be any larger than to hold the quantity of yarn which is twisted up in making the first strand of a rope ; for example, suppose in the common method of making ropes, one sixth part of the yarns is twisted up in the operation of making the first strand (say of yarns 180 fathoms long), then on this machine must be wound thirty fathoms of each yarn, so that (instead of a sledge moving forward, as in the common way, as the strand is twisted) this machine is fixed fast, and, as the strand is twisted from the opposite end of the yarns, each reel moves round and delivers its yarn, faster or slower according to the circle which each yarn occupies in the strand ; whereby a very considerable saving in the yarn will be found, by the quantity left on the reels of those yarns which lie in the inside parts of the strand. A rope thus made, by each yarn being kept tight from one end of the strand to the other in the twisting, will not only receive a

very considerable degree of additional strength, but will be much less liable to stretch ; and it will at the same time, from its compactness, keep the water out much better than a rope made on the old principle ; it will wear longer, and be less subject to what is called ' meg,' or to break in the partial manner called by seamen ' stranding,' which means one strand giving way before the other ; and, from the process I have made, all ropes from the circumference of two inches upward receive more than one fourth part of additional strength from this process, which strength increases as the ropes are made larger ; so that I apprehend a twelve-inch cable, made after this manner, will answer all the purposes of one of fifteen inches made in the common way, independent of the saving in the materials. The wheel, E, so frequently mentioned, is placed on the side of the great frame, A, on a round bolt or spindle of iron, marked v, about eight inches long and one inch in diameter, upon which bolt or spindle the wheel turns round ; and in order to use the wheel, E, so as to move the grate-work, c. from side to side (in case the seventh spindle should be broken, or not be wanted to be used), on the outer end of the barrel or nave of the wheel, E, may be fixed a handle, to turn it without the use of the teeth on the projecting part of the seventh spindle. On the back of the left-hand side of the great frame, A, through which the ends of each spindle come, it is necessary to have a hook or stop, for the purpose of fastening each handle, after a sufficient quantity of yarn is wound on the reels, so that the spindles may remain immovable during the operation of twisting the strands, while the reels work perfectly free and independent of each other round the spindle. It is also necessary to fix on each reel a piece of line or leather, fast at both ends, the bite of which is to be put through the holes of the grate-work in the uprights, marked q, for the convenience and despatch of fastening the yarns thereto ; which line or leather should be of such length as to be conveniently reached (say from two to three feet) ; and in order to have them always handy after the spare yarn is taken from them, a bolt, or piece of wood, may be put through the bites of those which the size

of the rope may not require to be used, to prevent them from being drawn through the grate-work, and thereby creating confusion among the reels. At the back ends of the lower parts of the great frame, A, should be fixed straps or bolts, for the purpose of fastening it, to prevent its moving forward during the operation of twisting the strands; and if it should be thought necessary, for the better strengthening and securing the spindles, more than one of the upright standards, P, may be used; for if that is done, it will render a proportionably greater number of the nuts, O, necessary for regulating the situation of the reels on the spindles.

“The above is the explanation of the construction and effects of the principal parts of the machinery used in this operation; what follows relates to the detached parts of the machinery which are necessary, according to my plan, to complete the whole. The machine which I call the separating machine (see Plate XI., figures 1 and 2) is for the purpose of keeping each yarn free and separate from the others, during the operation of twisting the strands; and there may be one of these separating machines for every fifteen or twenty fathoms of yarn to be twisted, at the option of the manufacturer. It is to stand loose, for the convenience of being moved when necessary, and its size must depend on the size of the great machine, A; but for the strand of a twenty-two-inch cable, I found it necessary to have its breadth three feet, and its height four feet six inches. The standards, or sides, marked *a*, may be made of wood, four inches broad and two inches thick; the rest of the frame in due proportion. In the inside of both the standards, or sides, *a*, must be a groove, two inches broad and three quarters of an inch deep, from the top to within two inches of the bottom of the standard, to admit the frame, *b*, to be slid up and down if thought necessary; and the two standards, *a*, may also, if thought proper, be connected, at half their height from the bottom, by a hinge, so that they may fall down outward, in order to give more room in the ropewalk; and when in use these sides may be kept fast by a small hook, bolt or pin, at each side. The

frame, *b*, must be made to fit the groove in the standard, *a*, and be half its height, into the bottom of which frame should be inserted and fixed bars of wood or metal, marked *c*, but I prefer wood, on account of its being lighter. Each of these bars should be as high as the frame, *b*, and about one inch square, having a space betwixt each of about one quarter of an inch. The frame, *b*, should be open at the top, like the teeth of a comb, for convenience of admitting the yarns to be dropped in, without the trouble of receiving them through; and to facilitate the doing of this, on one side of the bars there should be as many small bolts or rods, made of round iron, about one eighth of an inch in diameter, marked *d*, as there are spindles in the great machine, *A*, so that each yarn may be separated from the other; and these rods are to be put through bored holes in the three upright parts of the frame, *b*, marked *e*. On the end of each rod should be a small knob, or head, and upon the rods, immediately within their knobs or heads, must be placed a plate, *f*, with as many holes in it as there are rods, through one of which holes each rod is to pass, which plate I find best made of iron; it should be so long as to take in the ends of each rod, and of sufficient strength to bear the rods being all drawn out at once if required; upon which plate may be placed handles, large enough to receive a man's hand, in order to draw out the plate and rods all at once. These rods should be at equal distances, according to the size of the frame, as they are intended to keep the yarns from falling upon or mingling with each other; if they are at the distance of one inch it will be found sufficient to prevent confusion. The reason why these rods should be thus loose is for despatch; for example, before the ropemaker begins to work, all the rods are to be drawn out of the machine, and as the men or boys employed carry the yarn along, they are to drop the yarns between the bars, *c*; as soon as the yarn is put between every bar, the lowermost rod is to be put into its place, after which the next row of yarns is to be put in, then the second rod, and so on till the whole number of yarns required to be used shall be dropped in. The use of the plate, *f*, is as follows:

When the twisting of the strand is begun, and the top minor (an instrument used in twisting, the nature and use of which is hereinafter described) approaches toward the machine, fig. 1, one of the workmen is to draw all the rods out at once, by which means the yarns are entirely free of the machine, and no impediment is occasioned by the operation ; he is then to draw out the pin, *g*, which keeps the frame, *b*, in its place, whereby that frame falls to the bottom, in the grooves, as before described, and if occasion requires he is to unhook or loosen the hooks, *i*, by which means the upper part of the standards, *a*, falls down outward, and thereby gives more room in the ropewalk. According to the length of the rope intended to be made, more than one of these separating machines are to be used in the same manner ; I find, by experience, that one separating machine at every fifteen fathoms is sufficient, but the number should be proportioned to the distance each yarn is kept from the other, because the farther the yarns are separated from each other, the fewer of those separating machines are required. To prevent the strand from being twisted too quick, I have introduced an instrument, which I call the top minor, marked *u* (Plate XI., figures 3 and 4), which is inserted between the yarns, and keeps each yarn separate from the rest, it moving along as the strand is twisted. The top minor, *u*, should be made of strong, tough wood, which I have found best of elm or oak, and its shape and use are as follows : In shape it resembles a sugar-loaf, but is not so piqued at the small end, but at the broad end exactly of the same form as per drawing, *u* ; round the broad end should be fixed a hoop of iron, which is to be let in level with the wood, which hoop must be made according to the size of the top. To this hoop should be fixed small projecting pieces of iron, their length about two inches, their breadth about one inch, and their thickness in the middle about one eighth of an inch, and something smaller toward each edge ; they should stand at the distance from each other of one quarter of an inch, or more if possible to be allowed, which must depend on the size of the rope to be made, otherwise in making the strands of a great cable

its size will be increased so as to render it cumbersome to use ; for example, a top minor of about nine inches diameter at the broad end will be of a size sufficient for the twisting a number of yarns to make a strand of a twelve-inch cable, whereas, to make a twenty-two-inch cable, it would require one of twenty-four or twenty-six inches diameter ; and when the whole quantity of cavities between the spikes of the top minor are not wanted, the yarns can be placed between every second or third, so as to render but few of these top minors necessary in a ropewalk. Its length should be the same as the diameter at the broad end, and it should decline away toward the small end. At one fifth of its length from the broad end should be fixed, either into or through it, two handles, for the purpose of guiding it as the strand is twisted, by which means it may be impelled forward or kept back, so as to cause the strand to be twisted harder or more open, at the option of the workman, and the reason of its being so stunt (as I call it) at the small end is that it may not jam among the yarns ; and from its shape, and being greased before it is placed among them, it will be found to require very little assistance, but will move forward as the strand is twisted. If, in making the strand of a large rope, it is thought too large or cumbersome to be governed by hand, it may easily be fixed on a small sledge, to relieve the workman, which sledge, if necessary, can have a small winch in it, upon which winch a rope may be used, fastened to the opposite end of the ropewalk, to heave the sledge, and the top minor along with it, forward as wanted. Various other methods may be substituted for the purpose of preventing the strand from twisting, until it has received that position the workman wishes ; such as pieces of wood with holes bored in them ; small machines divided in a similar manner, or something like the separating machine before described ; or by the external application of a ring, or other circular instrument, or any other shape, so as to press upon the strand, and prevent its receiving an improper twist, to serve the purpose or intention of the top minor ; for, unless the strand is regulated in the twist, and kept exactly in the position in which it is to re-

main, the good effects proposed by this invention will be in a great degree defeated ; but it is not of any consequence in what manner it is regulated, so long as that point is accomplished. The reason why I prefer the top minor, as here described, and marked *v*, to any other mode is that it may be put among the yarns, and thereby save considerable trouble, and when it is done with, it can be easily taken out again. The length of the handles to be affixed to the top minor may be optional, from one to two feet and a half, and they may either be fixed into it, or run through it, and should be of iron, two inches and a half in breadth, half an inch thick in the middle, and rather thinner toward the edge. To prevent the strand, when it is twisted, from untwisting again, I have found it necessary to have a contrivance, which I call 'nippers,' marked *w* (Plate XI., fig. 3), which are to be screwed fast on that end of each strand which terminates at the great machine, *A*, after the strand has received its proper twist, and before it is loosened from the great machine, and placed on the great winch commonly used for the purpose of twisting the three strands into one ; and these will also serve to conduct the strands exactly toward the great winch, so as to prevent one strand being longer than the other ; they should be made of iron, sufficiently strong to bear the strain that may be requisite, which is no more than to hold the strands tight after twisting. In the bite of these nippers the strands must be fixed fast by a screw, and the nippers must be properly secured in the frame ; as soon as one strand is fixed on the great winch, the sledge with the nippers may be slipped under the next strand, and, when that is fixed, to the third. The thickness of the nippers, in the shank, should be about one inch in diameter, and the hole of the sledge, through which they are fixed, sufficiently large to admit their being turned round with ease ; their shape should be as per letter, *w*, and they may be fixed into the upper or cross-bar of the sledge, or the fore part of the great winch (at the distance of six nine or twelve inches from the shanks of the same), heretofore used in twisting the three strands into one ; but the nearer they are fixed, the shorter the neck need be to

convey the strand to the winch. The jaw, x, may be made to open sufficiently to receive one strand of the largest rope, as it may be screwed together so as to confine the smallest, and it may be made either round or square. In order to facilitate the general work, as each yarn must be placed separately on a reel on the great machine, A, it would be better to have a great number of whole yarns wound on separate reels, distinct from those which are placed on those spindles, always ready for use. The yarns may be wound on these reels by boys, women or old men, as soon as the yarns have gone through the tar, and are sufficiently dry. The size of these distinct or spare reels must depend on the length of the yarn, and they should be made of light wood, with a hole through each sufficiently large to receive a bolt, on which they can run round with ease, at one end of which bolt there should be a handle fixed; and as the reels are put on one by one, there should be a small brass or iron ring put between each, so as to prevent one reel from pulling the other round, similar to those between the reels on the spindles in the great machine, A. The use of these reels, with the yarns thus wound, will be easily perceived to be to facilitate the winding the yarns from them on to the reels or the spindles in A, and the number of them must be proportionate to the size of the rope intended to be made and the strength of those who are to carry them; and when the intended quantity of reels is put on the bolt, another handle may be easily put on the other end of it, to keep the reels on, and make it more convenient to carry. When the number of reels is so placed, the end of each yarn must be fastened to the bite of the cords, or leather straps, fixed on the reels of the great machine, A; then the intended quantity of yarn, from the other reels on the bolt, must be wound on the reels of the great machine, A, while those who bear the reels on the bolt walk on gradually toward the upper end of the ropewalk, permitting the reels to run round and quit the yarns as they go. When the reels on the great machine, A, have received as much yarn as is intended to be put on them, let the other ends of the yarn be fastened to the twisting winch, as usual, at the opposite

end of the ropewalk. It will always be advisable, in winding the yarns on to the reels in the machine, A, to begin with the lower rows of those reels, on account of placing or dropping the yarns properly into the separating machine ; and it will be also advisable to wind on to the reels, in the machine, A, as many yarns at one time as there are reels on one spindle, because, a whole spindle of reels being turned by one handle, time and labor will both be saved. In order to place the yarns in the separating machine with the greatest ease, the conductor, marked γ (Plate XI., fig. 4), will be found useful, and it may be made of wood, of a sufficient length to admit small pins to be fixed into it, at the distance of about one quarter of an inch from each other, between which the yarns may be placed as soon as they are wound on the reels upon the machine, A ; and two boys can, with the conductor borne between them, follow those who carry the yarn along, and by that means the yarns will be placed much sooner, and more regularly, in the separating machine. As few rope-makers have occasion to make cables larger than eighteen inches diameter, the generality of them will, in my opinion, find a machine that will contain 200 reels, for making one strand, large enough, but this will in some measure depend on the thickness of the yarns. It will be proper to have three of these machines, because then all the three strands of a cable may be twisted at one time, and thereby greater regularity effected. Those who make no larger than a sixteen-inch cable in diameter will find a machine that contains 160 reels large enough, allowing always for the different thickness of yarns ; but when a twenty-two-inch cable is to be made, it will be necessary to have the quantity I have mentioned in the former part of this specification, viz., 297 reels ; although by this improved method of laying the yarns together, by which each yarn is made to bear an equal strain, I am fully persuaded that an eighteen-inch cable will be found to answer all the purposes of one of twenty-two inches made in the common way ; and there will be a saving of a considerable quantity of the yarns, which will be found left on the reels, which, in the usual mode of twisting, would have been all wound up into

the strands, and which in a large cable will amount to a very important quantity ; or, if it should still be wished to use cables and ropes of the same dimensions as hitherto, a prodigious increase of strength, compactness and durability will be found in strands twisted by this machine. The ropes made by this machine should be wrought by steady and well-practised workmen, and when they come to lay the three strands into one, they should endeavor, by all means in their power, to turn at both ends of the ropewalk with an equal motion, so that no more twist may be taken into the first strands than when the top minor passes through them ; for, by any considerable alteration in twisting, either too slow or too quick, part of the improvement intended by this process may be defeated ; for if twisted too quick at the end toward which the top approaches, the outside yarns will receive more strain on them than they ought to have, and if too slow, the inside yarns will be affected in a similar manner. Therefore it is necessary to be attentive to this part of the process, and as the sledge, through which they twist the strands, as well as the machine, A, both stand fast during the laying the yarns into strands, it may not be amiss to have a small bell over each with a line fixed to it, and conducted along the top of the ropewalk, within reach, to give notice to the men at the other end when to stop. Every part of the manufacturing of cordage and ropes in general may be executed in the manner hitherto practised, except this of twisting the yarns into the first strands, whether for the purpose of making what are commonly called ‘water-laid ropes,’ or ‘shroud-laid ropes ;’ and the hemp may be dressed, and the yarn spun and tarred, in the usual manner. In making smaller ropes, three strands can be made on one machine, according to the number of the yarns which may be required. It must also be observed that in twisting the strands there must be a top minor for each, all of which should be carried along at one time, equal to each other, that the three strands may have an equal texture.”

The facts of the case as developed on the trial are detailed in the summing up of the judge.

LORD ELLENBOROUGH, C. J. This is an action to recover damages for the violation of a patent entitling the plaintiff, for a limited period of time, to the monopoly of an invention, which he states to be new, and beneficial to the public. This is a species of property highly important, as it respects the interests of the individual, and with him also the interests of the public. On the one hand, persons who are really the means of promoting any beneficial object should be protected for the period the law allows, and that they should have the benefit of the article so invented; and, on the other hand, in case they are not the inventors, that they should not lock up from the public, for that limited period of time, that invention, which, if they are not the inventors, they have no priority to, and which ought to be open to the public. In inventions of this sort, and every other through the medium of mechanism, there are some materials which are common, and cannot be supposed to be appropriated in the terms of any patent. There are common elementary materials to work with in machinery, but it is the adoption of those materials to the execution of any particular purpose that constitutes the invention; and if the application of them be new, if the combination in its nature be essentially new, if it be productive of a new end, and beneficial to the public, it is that species of invention which, protected by the king's patent, ought to continue to the person the sole right of vending; but if, prior to the time of his obtaining a patent, any part of that which is of the substance of the invention has been communicated to the public in the shape of a specification of any other patent, or is a part of the service of the country so as to be a known thing, in that case he cannot claim the benefit of his patent; and in claiming the benefit of a patent, it is required that there shall be enrolled a specification, which shall convey to the public a corresponding advantage with that of the individual whose sole right is protected for that time, so that any person looking at a specification, who is skilled in the subject, may be able to accomplish the end; and if in stating the means necessary to the production of that end, he oversteps the right, and appropriates more than is his own, he cannot

avail himself of the benefit of it. I don't mean if he states a bobbin which was in common use before, but if he states any particular thing before in common use, applied in a new manner to the production, and effecting a new end, that is part of the substance of the invention. And if he states that which of itself is not new, but old and known to the world, though it was unnecessary for him to do so, having done so, he has overstepped his right, and has included in his invention that which is not his invention ; in that respect his patent would be void. It is for you, applying these observations to the present patent of Mr. Belfour and of Mr. Huddart, to say whether this is a new invention, whether the springs are substantially a part of the invention, and if they be, whether they are new. It is likewise to be considered whether the tube is a new invention ; and the next consideration, supposing you should be of opinion that it is a new invention, and old means adapted to the production of a new effect, whether the defendant has been guilty of an infraction of the patent ; and I premise these observations for your better understanding the evidence.

The first piece of evidence is a letter, dated "Patent Ropery, near Sunderland, August 21, 1779. Our Mr. Grimshaw has just got home, and has informed us of your friendship to him, for which please to accept our thanks. He also informed us that you have a patent for improvements in rope-making, and that you were so obliging as to say that we might use your methods (at our ropery only) without premium, provided that the gentlemen concerned with you had no objections. As we are anxious to forward any improvements in the manufacturing of an article of so much importance to this maritime country, we take the liberty of requesting you will please to inform us whether we may consider ourselves at liberty to proceed in the adoption of your inventions." Now, to be sure, no argument arises upon the face of this letter that they knew and admitted that the invention of Mr. Huddart was a new invention, unless they were perfectly cognizant of all its parts at that time. But that does not appear from this letter ; it does appear that this man had visited their manufactory, and

after he had got home, he wished to have the liberty of using their invention ; that liberty is refused by a letter of the 29th : " Gentlemen, your letter of the 21st has been communicated by Captain Huddart (who is now on a survey) to the other gentlemen in the concern. Apprehensive a grant to you might lead to an invasion of our patent from other quarters, in justice to ourselves, after the considerable expense that has been incurred, we feel ourselves under the necessity of refusing your request." These letters are in 1799. Now, there is a letter since, so late as July 15, 1800 : " Gentlemen, after your application to Captain Huddart, for liberty to use his patent methods of making ropes, and our refusal to permit the same, it has greatly surprised us to receive information (as we have lately done) that you have introduced those methods of making ropes into your manufactory without our license, and even against our consent ; and that you use and vend ropes so manufactured in considerable quantities, in violation of the exclusive privileges granted by the said patent, and consequently to our great loss and injury. We should be sorry to be engaged in a litigation on this subject, especially with your house. It would give us great pleasure if you could satisfy us that we were misinformed ; but fearing that is not the case, and being resolved to protect our property in the most effectual and decisive manner, and to suffer no encroachment on, or violation of, those rights which we constantly respect in others, we think it proper to give you notice that unless you henceforth desist from the use of Captain Huddart's patent above mentioned, and make us proper acknowledgments for what is past, we shall immediately cause the necessary proceedings to be instituted against you for our protection in future ; and to obtain a compensation in damages for the injuries we have already sustained." This is a letter giving them notice that necessary measures would be taken against them, to obtain a compensation in damages. In answer to this, there is a letter of July 23, in the same year : " Sir, we have received your letter of the 15th instant, and as we believe that we have not introduced into our manufactory any methods for making ropes, in which

you are entitled to an exclusive privilege, we conclude you are misinformed on that point ; but, being equally with yourselves desirous of avoiding litigation, if you will inform us the instances, or in what parts you suppose us to have infringed on your patent rights, we may, perhaps, be able to convince you that there is no foundation for the charge. At the same time, to show you how little we are disposed to be litigious, we have for some time past remarked that there are parts of Captain Huddart's specification strictly within our prior patents, which we have refrained from noticing, because we would avoid contention as much as possible." Then there is another letter of July 14, 1801 : " Gentlemen, being informed that you carry on your manufactory of ropes in a secret manner, and as you refused me admission when I called upon you at the ropery, and having seen some ropes that were made by you, I am convinced, by the inspection of those ropes, as well as by your secret manner of conducting your business, that you are making use of my patent method of registering the strands of cordage, as described in the specification of my patent of the year 1793, and am therefore desirous that your manufactory should be inspected on my behalf by my friend Mr. John Rennie, engineer, whom I introduce for that purpose. Your answer and conduct on this occasion will enable me to determine in what light to consider you and your proceedings in this matter ; and unless I shall hereafter be better satisfied with the fairness and rectitude of your transactions than I am at this time, I shall commence and carry on against you such proceedings in law or equity, or both, as counsel shall advise." That letter is no further material than as it contains this complaint against them, and desiring to see their manufactory, which was refused.

The first witness called on the part of the plaintiff is Mr. Stodday, book-keeper to the defendants, who has been in that situation better than six years. He says, " From 1797 to 1800, I was acquainted with their manner of making ropes ; they then made ropes in the common way, in an open ropewalk ; I am not acquainted with the manner in which they now make their first strand ; a rope is composed

of three strands. I was advised with before in the common way ; although I live with them as before, I do not know in what mode their ropes are now made ; I am not acquainted with the manner of making Mr. Huddart's ropes." Upon cross-examination he says, up to 1800 the defendants made their strands in the common way, in a ropewalk. To be sure, no imputation lies upon them for not communicating to their own workmen so important a discovery as that the business of a ropewalk should be carried on in so small a space as is represented. "A common ropewalk," he says, "must be the full length of the yarn ; they make it now in an enclosed place not the twentieth part of a ropewalk." Upon being re-examined, he says, he saw the strands after they were made, and in opening out the strands, he observed a difference between the ropes made by them and the common ropes. In those, he says, made by his masters, the yarns all bear an equal proportion of strain, which is not the case with common ropes.

Mr. John Rennie is then called. He says he is an engineer by profession ; that he is acquainted with the subject of rope-making ; that, by the old mode, the yarns for the strands are cut of the same length ; they are stretched on the ground, previous to being twisted. When the twisting took place, some of the yarns took one station in the strand, and some another ; those nearest the outside, passing over a large space in the operation of twisting, were necessarily brought to a considerable degree of tension, while the yarns toward the centre of the strand become puckered up. The effect was that when a strain was put upon the rope, the external yarns sustained the weight, and those toward the centre sustained no part of the weight ; when the strain, therefore, was put upon the rope, the outside yarns, having been brought to a great degree of tension, naturally gave way first ; those in the next degree of tension gave way next, and so on, till the centre yarns, which were originally puckered, came to bear the weight. The number of yarns being diminished, of course those in the centre were unable to sustain the weight. He says, the common rope gave way in the manner I have stated ; in the wearing of a rope

the outside yarns wear first, then the second set of yarns, and so on ; a much less weight would break them in this state than would otherwise break them ; and this continued, that is the unequal strain continued, down to Mr. Huddart's patent. He says, " I have examined the patent and specification with attention ; it appears to me to have provided a perfect remedy for this defect by a new method. The specification and drawing annexed to it will enable a man of science to understand the method, and how it should be carried into effect." He says, " I have attended to the manner of constructing strands upon Mr. Huddart's plan." He assumes that the yarns to be manufactured have been usually put on bobbins ; they are then passed singly through a plate, which is called a register plate, composed of holes formed in concentric circles ; they are then passed through a cylindrical tube, which may be either solid or composed of two semicircular pieces ; the tube is the most essential part of the invention ; the yarns passing through the register plate are formed into one strand by this tube ; being disposed in concentric circles, they take the same relative position in the tube which they had before in passing through the holes, and in that state of relative position the strand is composed of concentric circles or shells of yarns, the outside shell being of a larger diameter ; the second shell or layer being of less diameter than the outside layer, the yarns are so much shorter ; each layer diminishes gradually till they come to the centre, which consists of a single yarn the length of the strand. I have examined some that have been so manufactured, and the strand being composed of compressible materials, if it were broke in the state in which it came from the registering machine, the centre yarn would break first, that next to the centre would break second, and the outside yarn would break last ; the outside shell of yarns surrounding a considerable body of hemp when it is brought to a degree of tension, the outside yarns compress the body of them within, and by this compression the angle is diminished, and they become longer ; the centre yarn being at its full length snaps first, then the next, and so on. In order to prevent this difficulty, Mr. Huddart has

contrived a mode of what he calls setting up or hardening ; after the strand comes from the register he gives it an additional twist, and by this means the centre yarn becomes one eighteenth part shorter, the outer yarns from the centre are set up proportionably to the centre, and by that means compressing the whole mass, each yarn is brought to a greater degree of tension than when it came from the registering machine, so that a weight being put upon the strand before it breaks, it lengthens as much as it had contracted before, and when it breaks the whole snaps together." He says the patent rope, upon an experiment he tried, bore a weight of 17 tons, 5 cwt. and 1 qr., and that a rope made in the common way, of the same materials, bore only 8 tons, 13 cwt. 1 qr. and 4 lbs.; and he says the patent rope broke all at once, and the old-fashioned rope snapped on the outside first, then the next yarn, and so on to the centre. He says this is a most important improvement. He says he should have no difficulty in constructing the necessary machinery for making a rope upon Mr. Huddart's plan, by looking at the patent and the specification. That is material to show that the specification is sufficiently explicit to enable a person of skill in the subject, upon reading it, to accomplish the purpose it professes to execute. Some rope of the defendant's manufacture being put into his hands, he says, if this is made upon Mr. Huddart's construction, the yarn that is on the outside at first will be the outside throughout the whole length of the strand, and will be the longest yarn ; the second shell will be the next longest, and so on to the centre, which will be the shortest. He says, I know of no other mode but Mr. Huddart's for producing this effect, and in proportion as that is deviated from, the strands will be worse ; this exhibits to the eye that regular gradation of length in the different shells which he should expect to find in Mr. Huddart's invention. The external yarn is two inches longer than the piece of strand ; the second is somewhat shorter than the first, and taking a yarn out of the third, he says that is half an inch shorter than the second ; and taking a yarn out of the centre, he says it is a little longer than the strand, owing to the setting up ;

and the result he draws is, that he believes this to be made upon Mr. Huddart's method. And I should state that this is certainly what is called *prima facie* evidence of its having been made by that method, when one sees it agree in all its qualities; when it is produced with a rope actually made upon Mr. Huddart's plan, it is *prima facie* evidence till the contrary is shown that it was made upon his method, and, therefore, as against him it should seem, supposing this patent in full force and a valid one, it is reasonable fair evidence, in the absence of contrary evidence, to presume that it was made in that way. There is certainly great weight in the observation of the counsel, "Am I to come forward and divulge my mode of making rope, from which I reap a great advantage?" Whether it was necessary to have gone that length in proof, does not appear; persons might have been called upon who might not be privy to the making of the strands in the small room. However, whether it puts him to inconvenience or not, the question is, whether it is *prima facie*, probable, presumptive evidence, in the absence of evidence on the other side, and it is a competent ground for you, if you think the facts bear you out, to form that conclusion upon.

Then a letter is read, threatening to bring an action, and insisting upon seeing the manner in which the manufacture was carried on. The answer to that letter is received verbally. Mr. Rennie put it down in writing; he says, "After delivering the letter to Mr. Grimshaw, I asked him to show me those parts that he did not generally show. He refused, because he did not show them to others, and because there were several partners to be consulted." He says, "I am certain, according to my judgment, that the specimen of the rope sold to Mr. Walker is made upon Mr. Huddart's principle. I know of no other mode but that mentioned in his specification in which it can be done in the perfect manner that this is done; there might be another mode without the perforated plate, by which it might by chance be done; but with it, it will be done with certainty."

Upon his cross-examination, he says it would be a lucky hit if such a rope was made without the perforated plate;

it could not be done otherwise than by chance. He says he thinks this has been set up, or hardened up, according to Mr. Huddart's method, described in the specification. He says he has not seen a model of the machine of 1793 that he recollects ; and no model has been shown us of the patent obtained in that year. The object of the patent is a more equal distribution of the strain upon the yarns ; each yarn is wound round a separate bobbin. Now the object of this patent, and to be sure the objects of the two patents are substantially the same, both of Mr. Belfour and Mr. Huddart ; but it does not follow that because the ends are materially the same, it is thereon open to the public. It has happened to me in the same morning to give, as far as I was concerned, my consent to the granting of three different patents for the same thing ; but the modes of attaining it were all different, and I thought I was entitled to receive them. He says the object of the patent was a more equal distribution of the strain upon the yarns ; the bobbins are ranged in a frame at one end of the rope-yard, and at the other end is the winch that turns the bobbins ; the ropewalk is longer than the strand. The desideratum in ropemaking was to keep the yarns separate and in a certain state of tension before they were taken up into the rope ; the twist in the ropewalk commences at the winch ; if the yarns were all kept in a state of tension, none of the bobbins would render more than is wanted at the twist ; at the superficies more of the yarn will be rendered than at the inner part.

Mr. Rennie dissects a piece of rope made on Mr. Belfour's method ; he takes an outside strand, and opens it ; the yarn is sometimes inside and sometimes outside ; he says that never would happen by Mr. Huddart's mode. He says, "I consider the bobbin as a matter of course ; it is of universal use in all manufactures that consist of threads ; the mere bobbin is like lead or iron, but the application of the bobbin with a spring to it appears to me to be a material part of an invention for making ropes." He then dissects a strand of Mr. Huddart's ; the outside yarn keeps its place throughout, and is longer by six inches than the strand ; the second

shell is not so long as the other by about an inch and a half, and so on to the centre yarn, which is the same length with the strand.

The evidence that has been adduced as to the value and utility of Captain Huddart's mode of making ropes leaves no doubt that, by whomsoever it was effected, this improvement is a most important one in the manufacture of cordage ; but it is material for your consideration whether it be a new invention, and if it be a new invention, whether this person, in taking his patent, has embraced within it, as essential parts, anything which was a part of a prior invention communicated to the public before, and to which, therefore, he had no right to any benefit.

On the part of the defendant no witnesses are called, but it is said that this is not an original invention, and if it is, there is no proof that we have violated it. It is no matter that the two patents profess the same object ; the end proposed in Mr. Belfour's invention is to improve the manufacture of ropes and cordage, by making every yarn employed in the composition thereof bear its proper and equal proportion of the stress. The description of the invention of Mr. Huddart is a new mode or art of making great cables and other cordage, so as to attain a greater degree of strength therein, by a more equal distribution of the strain upon the yarns ; the one is a more equal proportion of the stress, the other a more equal distribution of the strain.

As to the bobbins, they are not worth mentioning ; the springs and the tube are the things in which it should seem the principal originality of the invention consists. It is contended that the springs are not an essential part of the invention. If they are enrolled as an essential part, whether they are so or not, it would certainly go to his patent, because no deceptive things are to be held out to the public ; those that are material are to be held out as material ; according to the evidence of Mr. Rennie, they are material. He considers that they are material to regulate the tension. Mr. Huddart points out that his mode would be defective without springs. I will read to you first Mr. Belfour's, and then Mr. Huddart's. Mr. Belfour states how the end is

proposed to be answered : he says, " I have introduced four springs into each reel, which springs are marked L, and should be made of iron or steel, about two inches and a half in length, one fourth of an inch in breadth, and one eighth of an inch thick in the middle, and smaller toward each end ; two of these springs are fixed into each end of the barrel of the said reel in the inside ; one end of each spring is fixed fast to the barrel of the reel, the other end is movable, and is governed by a screw marked M, which, by being turned toward the right, closes the two ends, and thereby fixes the reel faster to the spindle ; or being turned the other way, opens the two ends, thereby allowing the reel to move more freely." According to the greater freedom of the motion of the wheel, or the retardation of the wheel, the greater or less tension is produced. Now Mr. Huddart's specification is this : " At K a spring is fixed to the wooden arm, by means of a screw and nails, or otherwise ; the screw works in the square part of the spindle, by means of which the spring may be made stronger or weaker, as requisite ; the other end of which rests upon the globular part of the head of the bobbin, formed for that purpose to regulate the tension of the yarn in drawing it from the bobbin, while the spindle is turning in registering the strand." Here for a moment let us take our stand. The same end appears to be produced, according to my understanding, by the one and the other, to regulate the tension ; now if it is a spring to regulate the tension of the yarn, which is essential to be regulated, it does seem to me, but it is for your judgment to say, whether it is a material part of the invention. If it be a material part of the invention, and relied upon as such, as it should seem it is by both, and if it is the same, then that which has been communicated by Mr. Belfour, Mr. Huddart cannot take the benefit of.

Then there is another matter, with respect to the tube. Mr. Belfour says various other methods may be substituted for the purpose of preventing the strand from twisting until it has received that position the workman wishes, such as pieces of wood with holes bored in them ; small machines, divided in a similar manner, or something like to the sep-

arating machine before described ; or by the external application of a ring or other circular instrument ; or any other shape so as to press upon the strand, and prevent its receiving an improper twist, to serve the purpose or intention of the top minor ; for unless the strand is regulated in the twist, and kept exactly in the position in which it is to remain, the good effects proposed by this invention will be in a great degree defeated ; therefore, it is not of any consequence in what manner it is so regulated, so long as that point is accomplished. Now what Mr. Huddart says upon it is this : “ This disposition of the yarns is necessary previous to their passing through the cylindrical tube of metal in which the strand is compressed and formed.” He says the tube compressing the yarns, and confining the outer shell to its proper figure, which outer shell compresses the next, and so on to the centre, there cannot be any crossing of yarns, or change in situation ; but the whole strand formed close and compact, and no more yarn required from the bobbins than is necessary, according to the situations of the shells, or their distance from the centre. Now the tube does seem to me, with submission to you, an important difference from the mere circle through which it passes, because it keeps it in a degree of confinement for a greater time, and more certainly obtains the end pointed out in Mr. Belfour’s specification ; the same end is to be obtained ; and had the patent been taken for that to be done by a tube which was before done by a ring or circle, I should have thought the patent good, for that is a distinct substantive invention. It will be for you to consider whether that which is pointed out in Mr. Belfour’s specification will be broken in upon by a tube, which keeps it in a state of confinement for a longer time, and attains the end with more certainty. It is for you to say, for that is the substance of the case as to the invasion of the patent, whether any essential part of it was disclosed to the public before. If you think the same effect in substance is produced, and that the springs in Mr. Belfour’s, by producing tension, obtain a material end in the making of ropes in the way proposed, and that it is in substance the same as in the other, this

patent certainly must, upon principles of law, fall to the ground. If you think it is not the same, or if you think it is not material, though we have had the evidence of Mr. Rennie upon its materiality—if you think this patent has been obtained for a new invention, carried into effect by methods new, and not too large beyond the actual invention of the party, in that case the patent may be sustained ; but if you think otherwise, in point of law or expediency, the patent cannot be sustained.

Verdict for the plaintiff ; damages, one shilling.

SMITH v. DICKENSON.

Common Pleas, Feb. 10, 1804.

Patent for Another's Invention. Contract. Fraud. Estoppel. Damages.

The plaintiff communicated the nature of an invention which he had made to the defendant, under an agreement by the latter that he would not take undue advantage of the communication. The defendant, however, took out a patent for the invention in his own name. *Held*, that the plaintiff was entitled to damages.

Motions, after verdict for plaintiff, by defendant for leave to enter a nonsuit, and by plaintiff for an increase of the verdict.

The declaration stated that the plaintiff had invented a certain spring apparatus for girthing saddles, and that in consideration that he would communicate the nature of the invention to the defendant, the defendant undertook that he would not avail himself or take any advantage of such communication under the penalty of £1,000. It then averred that the plaintiff did communicate the nature of the said invention ; but that the defendant disclosed and made known the nature of the said invention, and obtained His Majesty's letters patent for the sole use and benefit of the said invention for fourteen years, as being the invention of him, the

defendant, and thereby availed himself and took an undue advantage of the communication made to him as aforesaid ; whereby the defendant became liable to pay £1,000, according to his agreement.

The second count was the same as the first, with the addition of an allegation that the plaintiff sustained special damage by being prevented from taking out letters patent in his own name, and thereby lost great profit.

Plea non assumpsit.

The cause was tried after Michaelmas Term, 1803, before Lord Alvanley, C. J., when it was proved that the plaintiff having invented the spring apparatus mentioned in the declaration, the defendant called upon him, and expressed himself extremely desirous to be informed of the nature of the invention ; that the plaintiff communicated the invention to the defendant, upon his signing the following agreement : “ Thomas Smith, of No. 119, New Bond-street, saddler, having contrived various articles in the above branch, which he fully conceives to be new and valuable improvements, Mr. Robert Dickenson, of No. 55, Long Acre, being desirous of being made acquainted with one of the above-mentioned improvements, which Mr. Dickenson fully comprehends, under the title of spring apparatus, to answer or produce the same effect as those for which Mr. Robert Dickenson has already obtained the king’s patent ; he, Robert Dickenson, doth hereby promise and bind himself not to avail himself or take any advantage of such communication, under the penalty of breach of honor and £1,000.” That the defendant immediately on getting this information, entered a caveat against any person but himself taking out a patent for the above invention, and shortly after took out a patent for it in his own name, though it had been agreed between him and the plaintiff that they should jointly share the profits of the invention, but that the patent should be taken out in the name of the plaintiff ; that the defendant being unable to make out a specification in order to maintain his patent, obtained another interview at a house in Soho-square with the plaintiff, at which it was agreed that they should be jointly concerned in the in-

vention, the plaintiff being employed to make all the saddles ; and that the patent which had been taken out in the name of the defendant should still continue in his name. That upon the faith of this agreement, the plaintiff assisted in making out the specification, which was duly enrolled. That the plaintiff shortly afterward finding the defendant was using the patent for his own benefit solely, wrote to him upon the subject, and received from him the following answer :

“ Sir, I am unconscious of any contract at present between us, nor can Mr. N. or Mr. F. (two persons who had been at the interview when the specification was drawn out) help me to the recollection of any, although you refer me to them for that purpose. The two inventions for which I have obtained patents are my own inventions. Prior to my giving you a paper not to practise any invention you might communicate, I had deposited a drawing in the hands of a friend, and had a workman actually employed in making the articles for which my last patent is obtained, and this drawing was deposited for the purpose of proving, should it be necessary, what my design and invention consisted of, prior to any communication with you, lest even if it should be the same, I might still go on to obtain my patent. How far your invention resembles mine is of no consequence—I went on with my own. Your communication had in it nothing new, therefore I do not consider myself as using your invention, but my own.”

Upon this case it was objected by the counsel for the defendant that the gravamen laid in the declaration did not correspond with that which was in evidence before the jury ; but his lordship refused to nonsuit the plaintiff, and the jury found a verdict for the plaintiff for £300, the defendant agreeing to assign the patent to the plaintiff for the remainder of the term at the defendant's own expense. The plaintiff was to be at liberty to enter a verdict for £1,000 if the court should be of opinion that the sum of £1,000 mentioned in the agreement was in the nature of liquidated damages, and not a penalty ; and if the court should be of opinion that the defendant had not taken an undue advantage of the plaintiff a nonsuit was to be entered. Accordingly a rule *nisi* for a nonsuit on the one side, and for increasing the verdict on the other, having been obtained on a former day,

Best now contended that the gravamen in the declaration was supported by the evidence ; for although the plaintiff

by his conduct and agreement, at the time when he assisted in making out the specification, had waived any remedy for the plaintiff's misconduct in fraudulently obtaining the patent in his own name, yet that he had only waived it upon the condition of the defendant's fulfilling the agreement which was entered into at that time ; that the defendant having now renounced that agreement by his letter, the plaintiff's remedy revived for the defendant's original misconduct in obtaining the patent in his own name. He next insisted that the sum of £1,000, stipulated by way of penalty, was in the nature of liquidated damages, and consequently the plaintiff was entitled to have the verdict entered for that amount.

But the court expressed themselves clearly of opinion that the word "penalty" used in the agreement effectually prevented them from considering the sum mentioned as liquidated damages.

Shepherd and *Bayley*, on the other side, urged that the plaintiff's action could not be maintained on this declaration, since it was evident that whatever injury he might originally have sustained by the defendant's conduct in taking out a patent, yet that having subsequently assented to that act of the defendant, he could not now make it the ground of an action, but ought to have declared upon the new agreement ; and that in fact the plaintiff could not sustain any damage by the mere act of the defendant in taking out the patent in his own name ; for that without the plaintiff's subsequent assistance in making out the specification, the patent would have been of no avail.

LORD ALVANLEY, C.[•]J. This is an action for the breach of an agreement ; and the questions are, 1, whether the evidence proved that the defendant took any undue advantage of the communication made to him by the plaintiff ; and, 2, whether the advantage taken by the defendant, supposing it to be an undue advantage, corresponds with the breach laid in the declaration. It appears that the defendant came to plaintiff in order to obtain a knowledge of his invention, and was extremely anxious that some

terms should be entered into between them ; and at the same time he agreed not to take any undue advantage of the communication made. It was then understood that the patent was to be taken out in the name of the plaintiff. Let us see, then, what was the first use which the defendant made of his knowledge, there being at that time no contract in existence between them respecting any partition of profit in the invention. He immediately enters a caveat to prevent any other person but himself from taking out a patent. This was an improper use made of the discovery, upon which the plaintiff might have brought an action, though it is uncertain what damages he could have recovered. The defendant then obtains a patent in his own name, but being unable to make out the specification, he tempts the plaintiff, under pretence of offering him certain advantages, to complete the discovery. This was only a continuation of the same fraud ; for as soon as he has made out his specification from the information afforded him by the plaintiff, he refuses to execute any articles of partnership, alleging that he had obtained the patent upon a specification previously deposited in the hands of a friend. It is urged that the plaintiff agreed to release all breach of the first agreement not to take any undue advantage of the communication, upon the defendant entering into certain terms, and that the defendant is only guilty of a breach of those terms. Possibly those terms never were reduced into writing, and yet the plaintiff is called upon to waive his remedy on the first agreement, without any power of enforcing the second. It does appear to me, however, that although, had there been a formal release of the remedy under the first agreement, he must have been barred ; yet as the patent was allowed to remain in the name of the defendant only, upon the performance of certain conditions, the performance of which has not been shown, the plaintiff may resort to the breach of the first agreement, of which the defendant appears by the evidence to have been guilty. Indeed, the defendant's letter to the plaintiff puts the question out of all doubt, for he there insists upon the invention as his own, and repudiates any subsequent agreement, and justifies

taking out the patent in his own name as for an invention of his own. If a man give a bond for the performance of covenants, and the covenants being broken, the obligee agrees not to put the bond in suit upon the undertaking of the obligor to do certain things, and then the obligor refuses to perform his undertaking, can it be said that the bond is gone? Certainly not. So in this case, the subsequent agreement was a conditional agreement, and as the conditions were not performed, the action may be maintained upon the original agreement.

HEATH, J. I think the agreement upon which the declaration is founded is a subsisting agreement; and that the defendant, by entering the caveat, and taking out the patent in his own name, committed a breach of that agreement, there can be no doubt. It is insisted that the plaintiff waived the breach of this agreement, and certainly he might have done so: but I think that his conduct has been very well explained; for it appears that the defendant, with respect to the second agreement, was practising a mere fraud upon the plaintiff, and amusing him by a sham treaty for a partnership which he never intended to carry into effect. It would be very hard to refer the plaintiff to the second agreement, of the terms of which there is no evidence, but only of a treaty for an agreement. It appears to me, therefore, that the first agreement was not waived by the treaty for the second agreement, which the plaintiff was induced to enter into by the fraud of the defendant.

ROOKE, J. The only question is, whether the plaintiff, by the strict rule of law, is prevented from recovering for the breach of the first agreement; for there can be no doubt that the first agreement was broken. That fact was sufficiently proved by the defendant entering the caveat, and taking out the patent in his own name, immediately after the disclosure of the invention; and that breach appears to me to be both well alleged and proved. It is insisted, however, that the plaintiff must be nonsuited on the ground of the second agreement; but before the defendant is entitled to nonsuit the plaintiff on the ground of the second agreement, we must prove that agreement; whereas his own

letter disavows all agreement with the plaintiff upon the subject of the patent, and insists upon his own right to the invention.

Rule discharged.

TAYLOR v. HARE.

Common Pleas, May 20, 1805.

Consideration for Sale of Patent. Right to demand a Return.

A, having obtained a patent for an invention, of which he supposed himself the inventor, agreed to let B use it upon his making payment of a certain annual sum, secured by bond. This sum was paid for several years, when B, discovering that A was not the inventor, but that it was in public use before A obtained his patent, brought an action of money had and received, for a return back of the amount of the annuity paid. *Held*, that he could not recover.

Verdict subject to opinion of the court.

This was an action for money had and received. It came on to be tried before the Lord Chief Justice at the sittings after last Hilary Term, when a verdict was found for the plaintiff for £425, subject to the opinion of the court upon the following case.

On September 12, 1791, the defendant took out an invention for preserving the essential oil of hops in brewing. By articles of agreement, dated November 5, 1792 (which were set out at length at the end of the case), and made between the defendant of the one part and the plaintiff and his said late partner of the other part, reciting the defendant's patent, and that it gave him the sole power, privilege and authority of using, exercising and vending his invention for the term of fourteen years, the defendant granted to the plaintiff and his said late partner the privilege of making, using and exercising the said invention for the residue of the said term of fourteen years, and in consideration thereof the plaintiff and his partner covenanted that they would secure to be paid to the defendant during the said term an annuity of £100, and would give their bond

for that purpose, and a bond was accordingly given, conditioned for the payment of the said annuity. The plaintiff and his said late partner used the apparatus (for the making and preparing of which they paid a distinct price) from the date of the said agreement until the 25th day of March, 1797, and during all that time regularly paid the said annuity to the said defendant. The defendant was not the inventor of the invention for which he obtained his patent. The invention was not new as to the public use and service thereof in England, but it was the invention of one Thomas Sutton Wood, and had been publicly used in England by said Wood and others before the defendant obtained his patent. But the patent had never been repealed. The amount of the annuity which they had paid was £425. If the court should be of opinion that the plaintiff was entitled to recover back the money which was paid on the bond, the verdict was to stand. If the court should be of a contrary opinion, a nonsuit was to be entered.

Bayley, for the plaintiff. To support the present action it is not necessary to prove that any imposition has been practised. If it appear that the plaintiff has received nothing in return for the money which he has paid, he is entitled to recover back his money in this form of action. He was induced to pay his money upon the supposition that the defendant had the power of communicating some privilege. But as it now appears that the defendant's invention was not new, and that the patent was therefore void, the consideration upon which the plaintiff paid his money has wholly failed, and the plaintiff has derived no benefit whatever. Where an estate is conveyed, the vendor professes to convey nothing but his title to that estate. But here the thing itself which was the subject of the agreement had no existence. It was the understanding of all parties that the defendant was entitled to a patent right, but it now turns out that they were mistaken; the plaintiff, therefore, is entitled to recover the money which he has paid under a mistake. He had a right to make use of the invention without paying anything for it. The defendant has no right to the annuity, and indeed he has

already failed in an action on the bond in which the validity of the patent was put in issue.

Sir JAMES MANSFIELD, C. J. (stopping *Cockell*, for the defendant). It is not pretended that any action like the present has ever been known. In this case two persons equally innocent make a bargain about the use of a patent, the defendant supposing himself to be in possession of a valuable patent right, and the plaintiff supposing the same thing. Under these circumstances, the latter agrees to pay the former for the use of the invention, and he has the use of it. *Non constat* what advantage he made of it ; for anything that appears, he may have made considerable profit. These persons may be considered, in some measure, as partners in the benefit of this invention. In consideration of a certain sum of money, the defendant permits the plaintiff to make use of this invention, which he would never have thought of using had not the privilege been transferred to him. How then can we say that the plaintiff ought to recover back all that he has paid ? I think that there must be judgment for the defendant.

HEATH, J. There has never been a case, and there never will be, in which a plaintiff, having received benefit from a thing which has afterward been recovered from him, has been allowed to maintain an action for the consideration originally paid. We cannot take an account here of the profits. It might as well be said that if a man lease land, and the lessee pay rent, and afterward be evicted, that he shall recover back the rent, though he has taken the fruits of the land.

ROOKE, J. I am of the same opinion.

CHAMBRE, J. The plaintiff has had the enjoyment of what he stipulated for, and in this action the court ought not to interfere unless there be something *ex æquo et bono* which shows that the defendant ought to refund. Here both parties have been mistaken. The defendant has thrown away his money in obtaining a patent for his own invention ; not so the plaintiff, for he has had the use of another person's invention for his money. In the case of

Arkwright's patent, which was not overturned till very near the period at which it would have expired, very large sums of money had been paid ; and though something certainly was paid for the use of the machines, yet the main part was paid for the privilege of using the patent right, but no money ever was recovered back which had been paid for the use of that patent. I am therefore of opinion that judgment of nonsuit should be entered.

Judgment of nonsuit.

HARMER v. PLANE.

Chancery, 1807.

Injunction. Necessity for Establishing Right at Law.

An injunction may be granted on proof of possession and public acquiescence, until the right can be tried at law, upon the ground of convenience. *So held* in the case of a patent for improvements upon a machine the former patent for which had expired, and where the specification described the machine with the improvements as an entire machine, the subject of the latter patent, without distinguishing the improvements.

A patent for improvements upon a machine may be valid, but it does not restrain from using the machine in its original form.

Application for injunction.

A patent had been granted in the twenty-seventh year of King George III. for a machine for the manufacture of woollen cloths. In 34 George III., another patent was granted for improvements upon the machine. Upon a motion to dissolve an injunction obtained by the patentee, an objection was taken to the specification under the latter patent as describing the machine with the improvements as one entire machine, the subject of that patent, not distinguishing the original machine from the improvements. The answer admitted that the improvements were new, substantial, and a great saving of power, and that the description in the specification of the machine with

the improvements is accurate and intelligible ; so that the machine could be made according to that description.

Richards, Hart and Wetherell, for defendant.

Romilly and Scott, for plaintiff.

Lord Chancellor ELDON. The ground upon which, where doubt is excited in the mind of the court, an injunction is granted, until the legal question can be tried, a ground that was acted upon in the case of Boulton and Watt (*ante*, p. 97), also in some cases preceding that and some that have occurred since, is this : where the Crown on behalf of the public grants letters patent, the grantee, entering into a contract with the Crown, the benefit of which contract the public is to have, and the public have permitted a reasonably long and undisputed possession under color of the patent, the court has thought, upon the fact of that possession proved against the public, that there is less inconvenience in granting the injunction until the legal question can be tried than in dissolving it at the hazard that the grant of the Crown may in the result prove to have been valid. The question is not really between the parties upon the record ; for, unless the injunction is granted, any person might violate the patent ; and the consequence would be that the patentee must be ruined by litigation. In the case of Boulton and Watt, therefore, though a case of great doubt, upon which some of the ablest judges in Westminster Hall disagreed, yet upon the ground of the possession by the patentees against all mankind, the injunction was granted until the question could be tried ; and the result of the trial, being in favor of the patent, proved that the conduct of the court in that instance was at least fortunate.

The first of these patents, granted in the twenty-seventh year of his present Majesty, is expired ; and the patent for the improvements was granted in 34 George III. The agreement, entered into by this defendant, for a license to work under the patentee, would not bind the defendant. If the plaintiff could not legally grant that license, there was no consideration, and the question between them therefore is entirely open. Still, however, the patentee has

had possession against all the world ; and if he can maintain its validity by a due performance of the condition as to enrolment of the specification, by dissolving the injunction in the mean time I should act both against principle and practice ; not only enabling this defendant against law to exercise a right in opposition to the patent, but also encouraging all mankind to take the same liberty.

I do not say a case might not exist where possession might be distinctly proved, and yet there might be such strong doubt whether the specification was not bad in law that the court would *brevi manu* interfere, and put an end to the injunction ; and if I am to decide upon the inclination of my own opinion, where the practice is differently represented and considerable doubt may be raised in argument, I think it is difficult to support this specification. The first patent, granted in the twenty-seventh year of the king, and expressly for this machine, expired in 1801 ; and the liberty of making that machine continued to be exercised under that grant until the thirty-fourth of the king, 1794, when the application was made for a patent for improvements upon that machine. I do not enter into the question whether a patent for improvements can be supported. The affirmative has been long settled, and undoubtedly is the law. The right under that patent to use those improvements would subsist until the year 1808 ; but the original instrument, without the improvements, was open to the public in 1801. In former instances great industry appears to have been exerted by patentees (who, I think, in general, have been hardly dealt with, but not in this respect) in the invention of some improvements, annexing them to the subject of the patent ; and endeavoring to cover that, as well as the use of the improvements, during a much longer period than the law allows. If the improvements are of such a nature, so valuable, that their value gives such an additional value to the old machine that the public would prefer the improved machine, paying for the improvements, to the old machine without them, it is in respect of the worth of the improvements, in consideration of the benefits derived from them, that the public abstains

from the use of the original machine ; but the choice ought always to be left open.

The second of these patents expressly recites the former as a patent for the original machine. The specification expressly recites that the patentee had made improvements upon the old machine ; that in those improvements the invention, the exclusive benefit of which was claimed, consists ; and desires a patent for those improvements, which was granted accordingly. In compliance with the condition prescribed by a clause of the patent, that if the patentee shall not particularly describe and ascertain the nature of his invention, and in what manner it is to be performed, etc., the letters patent shall be void, the patentee enrolled a specification, reciting the letters patent, dated March 29, 1794, granting the invention of the improvements ; stating that they give special license that the patentee shall, and no other person shall, from time to time, and at all times, etc., make use of, etc., " a machine by him invented and found out for raising the shag upon all sorts of woollen cloths, and cropping and shearing them," etc., and enjoy the benefit " of the said invention" during fourteen years from that date ; then reciting the proviso in obedience to which he described the nature of the invention, referring, as he must do, to the drawings in the margin, and explaining them.

No man, reading this specification, can possibly collect from it the fact that there were two patents,—the one for the original machine, the other for the improvements upon that machine. It was argued, and very fairly, that if there is an original patent, and a specification under it, and then a patent for improvements, and a specification under that patent, incorporating, either by reference or repetition, the specification under the former patent as part of its own description, and proceeding to show what are the improvements, that would be a good specification ; but I doubt whether it must not appear upon the specification, enrolled for the improvements, what are the improvements ; and still more whether it must not so exhibit the thing to be specified as to show that it is the improvement in respect

of which the patent for the invention is granted, not having a tendency to mislead. Every person reading this specification would believe that in 1794 a patent was granted for a machine ; and the specification holds out that the patentee is protected as to the use of every part of that machine, constructed and worked according to the description contained in that specification, constituting the whole of it from the date of the only patent recited, that of 1794, until the year 1808. The question to be tried will be, not that stated at the bar, whether a specification referring to a former patent, and endeavoring to incorporate in it the former specification, would be sufficient in law, but whether a patent for a machine with a due specification having been granted, and a subsequent patent being granted for improvements, it is competent in law to represent in the specification that the latter patent was granted, not for improvements, but for the machine, carrying forward that idea, and describing the new invention as one entire machine, not as improvements contradistinguished from the original machine.

I feel very considerable doubt whether that can be made good ; but there has been possession sufficient under this patent to make it fit that it should be tried, taking care that it shall be tried speedily. It may be put in the shape of a case, stating the specification under the first patent, the second patent and specification ; then stating facts sufficient to introduce the question, as a question of law, whether the condition for enrolling a specification had been duly complied with. I adhere to the law as I stated it in the case of *Cartwright v. Eamer*. (See *ante*, p. 113 ; also *Harmar v. Playne*, *post*, 171, 174.)

The motion stood over, that the parties might agree upon a case.

1809.]

HARMAR v. PLAYNE.



HARMAR v. PLAYNE.

King's Bench, April 28, 1809.

Specification. Sufficiency.

H, having obtained a patent for a certain machine, a specification of which he duly enrolled, afterward obtained another patent for certain improvements in the machine. In this patent the grant of the former patent was recited; and the latter patent contained the usual condition, that it should be void if the patentee did not, within one month, enroll a specification particularly describing and ascertaining the nature of the said invention, and in what manner the same was to be performed. *Held*, that a specification containing a full description of the whole machine so improved, but not distinguishing the new improved parts from the old parts, or referring to the former specification otherwise than as the second patent recited the first, was a performance of that condition.

Case stated from Chancery.

The case as stated by the Chancellor to obtain the opinion of the Court of King's Bench showed the following facts: Letters patent, dated March 20, 1787, granted to John Harmar, the plaintiff, for fourteen years, the sole privilege of making, using and vending a certain machine by him invented for raising a shag on all sorts of woollen cloths, and cropping or shearing them, which together come under the description of dressing woollen cloths, and also for cropping and shearing of fustians. This patent contained the usual proviso or condition avoiding the patent in case of failure to enroll a specification and drawing, which are annexed.

March 29, 1794, another patent was granted to Harmar for improvements. This patent recited that he had already obtained the patent of March 20, 1787, for his machine for raising a shag, etc., and declared that he had invented considerable improvements in that machine, for which he desired a patent; and it granted him the sole privilege and authority to make, use and vend his said invention; but upon the usual condition that he should enroll a specification which should particularly describe and ascertain the

nature of the said invention, and in what manner the same was to be performed.

Within the time allowed, Harmar did enroll a specification with drawings under the latter patent. It is annexed. But this second specification did not in any manner describe or point out the improvements upon the former machine by any verbal description or by any delineation or mark in the drawing; and the drawing was not a representation of the improvements separately, but of the whole machine in its improved state; and the improvements were not in any manner substantively and individually explained by the second specification; and the machine in the improved state was not contradistinguished from the state and condition of it under the former patent by any explanation whatever, or by any delineation or mark in the drawing; but what the former machine was, and what were the improvements thereupon, were ascertainable only by referring to the first specification and the drawings thereon, and comparing the second specification and the drawings thereon with them. The defendants objected that the second patent was void for want of a sufficient specification; and the question referred to the Court of King's Bench was, whether the condition in the patent of March 29, 1794, had been duly performed by the enrolment of a specification.

Holroyd, for the plaintiff, contended that the condition had been duly performed. The patent, and the specification referring to it, are to be construed together as one instrument, as in *Hornblower v. Boulton* (*ante*, p. 98); and the second patent recites the first, and that the patentee had invented certain improvements in the former patent machine, for which improvements another patent was prayed, which the king grants. The first patent and specification being enrolled, the public must be taken to know their contents; or at least the second patent, by referring to the first, directs the party to the source from whence that information may be obtained in the manner required by law. The very nature of the second patent, which is for improvements in a machine for which a former patent had been granted, points to such former patent, and the specification annexed.

There need not be an express reference ; and by comparing the two patents and specifications together, the party seeking for information as to what he may lawfully make without the license of the patentee must necessarily see for what particular parts of the improved machine the second patent was granted ; and the patentee was not bound to state in his second specification that which he had before stated separately in his first, and which the subject was bound to know. A specification need not contain everything in length relating to the subject-matter, but may refer to other public instruments, or to general sources of knowledge, which every person of reasonable skill and information on the subject may fairly be presumed to know. There is a constant reference in these instruments to drawings which accompany them, and without which the description of the particular invention would not be intelligible. [Lord ELLENBOROUGH, C. J., asked whether it were meant to be contended that a specification might refer to such and such articles in Chambers's Dictionary for a description of one part of a machine, and to certain other descriptions in other books for other parts and so on, which would lead to great inconvenience, and make the new invented parts described wholly unintelligible to those who were not furnished with those works, when the object of requiring a specification to be enrolled seemed to be to enable persons of reasonable intelligence and skill in the subject-matter to tell from the inspection of the specification itself what the invention was for which the patent was granted, and how it was to be executed.] The public must take notice, at their peril, of all patents on record, and the last of them to which the specification in question belongs refers to the other. No person can be misled by the specification of a patent for an improved machine, describing the whole machine so improved ; it is even more convenient than merely stating what the improvements are, which would be a literal compliance with the condition, but far less intelligible ; for such a bare method of describing the new invention would require a much higher degree of knowledge and memory of the subject-

matter and of every former patent than this, which describes the whole combination of new and old parts, forming the entire improved machine. The patentee has only an exclusive right to the whole combination for which his patent is granted, and the use of particular parts only is no breach of his rights. The description, therefore, of the particular improvements, distinct from the parts in general use before, would be useless to all and less intelligible to many. Patents were formerly considered as injurious monopolies, and were therefore construed by the courts with great strictness. But now, when a more liberal and just view of the subject prevails, they are properly considered as highly advantageous to the public, by holding out an encouragement to ingenious men to disclose their inventions; and Lord Eldon, when presiding in the Court of Common Pleas, said in the case of *Cartwright v. Eamer*, in Easter Term, 1800, in that court, that they were to be considered as bargains between the inventors and the public, to be judged of on the principle of keeping good faith by making a fair disclosure of the invention.

LORD ELLENBOROUGH, C. J. The difficulty which presses most is, whether this mode of making the specification be not calculated to mislead a person looking at it, and induce him to suppose that the term for which the patent is granted may extend to preclude the imitation of other parts of the machine than those for which the new patent is granted, when he can only tell by comparing it with some other patent what are the new and what are the old parts. And if this may be done with reference to one, why not by reference to many other patents, so as to render the investigation very complicated? It may not be necessary, indeed, in stating a specification of a patent for an improvement to state precisely all the former known parts of the machine, and then to apply to those the improvement; but, on many occasions, it may be sufficient to refer generally to them. As in the instance of a common watch; it may be sufficient for the patentee to say, take a common watch, and add or alter such and such parts, describing them. And when

Lord Mansfield said in the case of *Liardet v. Johnson* (*ante*, p. 22), that the meaning of the specification was that others might be taught to do the thing for which the patent was granted, it must be understood to enable persons of reasonably competent skill in such matters to make it; for no sort of specification would probably enable a ploughman, utterly ignorant of the whole art, to make a watch.

Wetherell, for the defendant. The proviso in the second patent is express, that the patentee shall particularly describe and ascertain the nature of the said invention, that is, the improvements, and in what manner the same was to be performed. If that condition be not performed, the patent is declared void. Now it is not pretended that the improvements of the machine, for which alone the second patent was granted, are particularly described and ascertained in the specification, but the whole machine, including indeed those improvements, is so described, without ascertaining the newly-invented parts. But the patent was not for the whole machine, but for a part only; so that no person, looking only to the second specification, or to that and the patent to which it appertained, could inform himself for what parts of the machine that patent was granted; and that knowledge can only be acquired by looking to both the patents and specifications. Unless the alteration of or addition to an old machine be *bona fide* an improvement, and useful to the public, the Crown cannot grant a patent for it; and therefore it should appear upon the face of the instrument itself what the improvement is. Buller, J., in the case of *Rex v. Arkwright* (*ante*, p. 29), lays down certain rules for the construction of patents, under the third and fourth of which the objections to this patent range. "Thirdly, if the specification be in any part of it materially false or defective," the patent is void. "Fourthly, the patent must not be more extensive than the invention; therefore, if the invention consist in an addition or improvement only, and the patent be for the whole machine or manufacture, it is void." Now here the specification is materially defective, in not ascertaining how much of the whole machine described is the new invention; and though the

plaintiff has not taken out this patent for the whole machine, yet, having obtained his patent for the improvement of the machine, he has not made a specification of that improvement, as he was bound by the condition of the grant to do ; but has made a specification larger than the patent, upon the face of which the particular improvements cannot be ascertained. In *Turner v. Winter* (*ante*, p. 43) it was held that if the specification were ambiguous, or gave directions which tended to mislead the public, it avoided the patent. It is not enough, then, that persons of great skill and experience may be able to find out the invention from the specification ; but it should be plainly stated, so that a person of reasonable knowledge and experience upon the subject may immediately be made acquainted with the invention. The specification ought to inform the public what the thing is for which the patent is granted, and how it is to be made, and not merely inform them where else that information is to be acquired ; for that is not a compliance with the condition. No person applying to the specification of one patent is bound to know that another has been granted. If inquiry be necessary to be made for facts *dehors* the instrument itself, it is difficult to say where the line is to be drawn ; references may as well be made to dictionaries of arts and sciences, philosophical transactions, etc., as to other patents and specifications. The patentee is not to throw on the party inquiring the trouble and expense and loss of time of acquiring the knowledge of his invention by investigation and comparison. The generality of the whole description may render it as ambiguous and difficult to be understood as the too great generality of the particular terms in *Turner v. Winter* did. The public may well imagine from this specification that the plaintiff had a patent for the whole machine, when in truth it was only for a part of it. It may be doubtful whether a direct reference to the former specification would have sufficed ; but here there is no such reference, but the two instruments are endeavored to be connected through the intervention of the second and first patents. If there were a succession of patents for several improvements, ending at different periods,

it might be extremely difficult for a person to collect from specifications of this kind the periods when the several inventions would be open to the public. But the true sense of the condition is to give the public direct and complete information of the manner of executing the invention, without further search or trouble. [LE BLANC, J. There lies the difficulty ; for suppose the specification had merely described the improvements, such as the addition of a crank or a screw to such or such a part, must not the party still have referred to the original specification, or at least have brought a full knowledge of it with him, before he could understand truly how to adapt the new parts described to the old machine ?] Admitting that there may be some difficulty in satisfying the object of the specification by a mere description of the new parts to be added to the old machine, the patentee would be bound to state so much of the original specification as would make his description of the improvement intelligible ; and perhaps the better and safer way would be to state the whole, and then to mark by references the new parts ; but in whatever way it be done, the public should be able to ascertain at once, without looking to any other instruments, which are the new parts for which the patent is granted ; and no objection could be made to any surplusage of explanation, provided it was not given in a manner to confound the inquirer as to the new invention.

Holroyd, in reply, said that if references to other instruments were made in such a manner as to obscure the subject and confound the inquirer, that would avoid the patent ; but so far as the public are interested in having a perspicuous description of the machine in its most improved state, it cannot be done more effectually than by describing the entire improved machine ; and those who are interested in discriminating between the old and new parts can have no difficulty in doing so, by comparing the two specifications ; the latter of which, through the medium of the patent, having express reference to the former one ; and every person being bound at his peril to notice these enrolments, and being liable to an action for infringing the patent, without

having personal notice of it. Admitting, therefore, that a patentee cannot refer an inquirer to books or other writings, which he may or may not be able to obtain, or can only obtain by paying for it, or by the indulgence of another ; yet here he is referred to a public source of information appropriated to this express purpose, which the patentee himself has afforded, and which the other has a right to have. [BAYLEY, J. Suppose the former patent and specification to be lost by accident ; how is the public to know from the specification of the second patent how much of the whole improved machine they may use ?] The law presumes that all records will be properly preserved. The same difficulty, however, would occur if a drawing annexed to the specification in question were lost ; and indeed in the case put, there would be an advantage to the public in this mode of specification more than sufficient to counterbalance the loss of the particular information, as thereby the knowledge of the whole improved invention would be preserved. The greater difficulty would be thrown upon the patentee himself in showing what the precise improvement was, in an action for the infringement of his patent ; his claim of monopoly being confined to the whole combination described. As to the labor or difficulty of comparing the second with the first specification, in order to find out the invention, some labor and difficulty of this sort must always occur where drawings are referred to, annexed to the specification ; they must be read and compared together, and the party must bring his general scientific or mechanical knowledge, and perhaps other general information, to bear upon the subject. If the first specification had been actually recited in the second, there must have been the same labor of comparison as in this case ; the only difference here is that the party must refer to another parchment or record.

Lord ELLENBOROUGH, C. J. I own I was disposed to think that it was a departure from the terms of the proviso for the patentee merely to tell the inquirer who came to consult the specification how he might learn what the in-

vention was, instead of giving him that information directly. But I feel impressed by the observation of my brother Le Blanc, that the trouble and labor of referring to and comparing the former specification with the latter would be fully as great if the patentee only described in this the precise improvements upon the former machine. Reference must indeed often be necessarily made in these cases to matters of general science, or the party must carry a reasonable knowledge of the subject-matter with him, in order clearly to comprehend specifications of this nature, though fairly intended to be made. We will, however, consider the case and certify our opinion.

The court afterward certified to the Lord Chancellor, that they had heard the case argued by counsel, and were of opinion that the proviso or condition in the letters patent, bearing date March 29, 1794, had been performed by the enrolment of the specification thereof set forth in the case.

WATSON v. PEARS.

King's Bench, N. P., Dec., 1809.

Specification. Time allowed for Enrolment.

A patent, dated May 10, contained a proviso that a specification should be enrolled within one calendar month next and immediately after the date thereof. The specification was enrolled on June 10, following. *Held*, that the month did not begin to run till the day after the date of the patent, and that the specification was enrolled in time.

Action for damages for infringement.

The action bore date May 10, 1808, and contained the usual proviso that a specification should be enrolled "within one calendar month next and immediately after the date thereof." The specification was not enrolled till the 10th of June following.

Park, for the defendant, insisted that the patent was void, the specification not having been enrolled on or before

the 9th of June, when one calendar month from the date of the patent expired. The month must begin to run from the 10th of May, and included the whole of that day. It therefore could not extend to the 10th of June, there being a clear impossibility of two days of the same number being comprehended in one calendar month.

Selwyn, for the plaintiff, relied upon *Thomas v. Popham* (Dyer, 218 *b* ; Moore, 40). The question arose there upon the Statute of Enrolments, 27 Hen. VIII., c. 16, which enacts "that the enrolment shall be made within six months next after the date of the deed." The indenture in issue bore date October 9, 1557 ; it was enrolled in Chancery on March 21, 1558, which was the last day of the six months, reckoning twenty-eight days to each month, and making the day of the date *exclusive*. The court *held*, that the indenture was well enrolled, and that the words "next after the date of the deed" were exclusive of the day of the deed.

Park urged that in that case the court was bound, if possible, to support the validity of the deed against the grantor, who was a subject ; but that the grant here, being by the king, was liable to a different rule of construction, and that it had been often decided that where a period was to be reckoned from a date, the day of the date was inclusive.

LORD ELLENBOROUGH. It used to be held that "from the date" includes the day, and "from the day of the date" excludes it. But since the case of *Pugh v. The Duke of Leeds* these formal distinctions have been done away ; and the rule of good sense has been established, that such words shall be construed according to the meaning of the parties who use them. The case cited upon the Statute of Enrolments, I think, is expressly in point. That shows that the day on which the patent bears date is not to be reckoned. The month therefore only began on May 11, and included June 10, the day on which the specification was enrolled.

The defendant afterward had a verdict on the merits.

BAINBRIDGE v. WIGLEY.

King's Bench, N. P., Dec., 1810.*Specification. Breadth of Description.*

The specification for an improved flageolet claimed that it would produce notes not obtained by previous methods. The evidence showed the production of only one new note. *Held*, that the patent could not be sustained.

Action for infringement.

The patent in question was granted to the plaintiff for certain improvements on the English flute, or flageolet.

The specification was as follows :

“ First and principally, I do construct the English flute or flageolet in such a manner, and with such proportions of the parts, that the upper joint or mouth joint shall be the same or nearly the same as in other English flutes or flageolets, as far as relates to the several parts by which the peculiar sound of the instrument is produced, and that the other joints upon which the fingering is performed shall be either the same or nearly the same as those of the German flute, in order and to the effect that the English flute or flageolet, so altered and improved, may and shall require the same fingering in performing as is required to be used in performing on the German flute. And I do declare that in order to produce the said last-mentioned effect in the most complete and perfect manner it is necessary that the following directions should be attended to, that is to say : Let the upper joint, which is to be plugged, be bored throughout regularly from end to end about one eighteenth part of an inch wider than the upper joint of a German flute of concert pitch, and let the other joints be turned and bored in the same manner as a good German flute, with the additional keys, or with one only, as may be required. And let the holing be the same, except the third and fourth hole from the top, which will be better if made a very little smaller than usual, because such construction will prevent the *G* and *A* from being too sharp. And whereas, the *F* sharp is too flat on most flutes, it is advisable to make the fifth hole a very

little larger than on the German flute. And, moreover, I do declare that the upper joint of the English flute or flageolet may be turned of the same thickness as that of the German flute of the same pitch, and that in such and the said case the distance from the centre of the plugged part to the centre of the uppermost finger-hole must be about nine inches and five eighths. And that I do cut away the back part of the plug underneath about one inch deep, but do at the same time leave that part of the plug which covers the throat about the thickness of three sixteenths of an inch, but that the thickness or quantity to be cut from the plug may be, without difficulty, regulated by a competent workman or maker of these or the like instruments. And further, that the breadth of the plug-hole of an English flute or flageolet as before described must be from side to side about half an inch, and the distance from the bottom of the plug to the wind-cutter about the three sixteenths of an inch ; and that the distance from the hole out of which the sound issues, or the plugged hole to the first finger-hole, may be varied, and the same effect continue to be produced ; that is to say, if the plugged joint be turned of larger diameter, and plugged according to the proportions hereinbefore given, the flute will be flatter, and, consequently, the distance between hole and hole must be less ; and so, on the contrary, if the diameter or bore be smaller and the plugging the same, the instrument will be sharper and the distance from hole to hole must be greater ; and a like observation may be made with regard to the variation of the said distance between hole and hole if the plugged hole from which the sound proceeds be made either larger or smaller, because the larger hole will give the sharper pitch, and will require the said distance between hole and hole to be greater ; and, on the other hand, the smaller hole will give the flatter pitch, and require the said distance to be less, the bore being supposed the same in both cases. And lastly, if the bore itself be varied as to the plug or upper joint, the wider bore will be the flatter tone, and require the holes to be nearer together than would be required if the bore were narrower.

“ Secondly, I do make a small aperture about the size of

a strong pin in the said top joint, about two inches from the top hole of a concert flute or flageolet, as hereinbefore described ; and I do cover the said hole either with the thumb or by means of a key for producing all notes below *E* on the fourth space, and I do uncover the same for producing all notes above that *E*, by which means the said last-mentioned notes are rendered more clear and certain. And I do declare that the said small aperture will produce the like effect if placed within considerable limits, either higher or lower, but that the situation here described is the best, because it makes very little difference of pitch in the notes above *E*.

“Thirdly, in order to construct flutes of various sizes with the improvements hereinbefore described in the best manner, the following instructions must be attended to. 1. For the octave let the upper joint be bored about the thickness of a piece of paper wider than the German flute of that size, and from the top finger-hole to the sound-hole or centre of plug-hole, when turned the same as an octave German flute, the distance must be about four inches and a half, and the breadth of the plug-hole about five sixteenths of an inch, and from the bottom of the plug to the wind-cutter about one eighth of an inch, and the back of the plug must be cut away, as in the large size, about half an inch, leaving the surface of the plug in thickness about one eighth of an inch, and the said small-sized flute may be constructed either with or without the aperture hereinbefore described, and made for rendering the upper notes more clear and certain. 2. For the *C* flute or one size larger than the octave, the distance from plug-hole to finger-hole must be five inches, breadth of plug-hole five sixteenths, and from the bottom of the plug to the wind-cutter, about one eighth of an inch, the plug being cut away underneath as before. 3. For the *B* flute, from plug-hole to finger-hole five inches and seven eighths ; breadth of plug-hole, nearly three eighths ; from plug to wind-cutter one eighth ; and the plug cut underneath as before. 4. For the *A* flute from plug-hole to finger-hole six inches and three eighths ; breadth of plug-hole nearly three eighths ; from plug to wind-cutter full one eighth ; and the plug cut under as

before. 5. For the *G* flute, from plug-hole to finger-hole, seven inches ; breadth of plug full three eighths ; from plug to wind-cutter, full one eighth, and the plug cut underneath as before. 6. For the *F* flute from plug-hole to finger-hole, seven inches and five eighths ; breadth of plug-hole, seven sixteenths ; from plug to wind-cutter, three sixteenths ; plug cut underneath as before. 7. For the *E* flute, from plug to finger-hole, eight inches and a half ; breadth of plug-hole, near half an inch ; from plug-hole to wind-cutter, three sixteenths ; plug cut underneath as before ; and smaller or larger flutes may be made conformably to the said instructions, and all the several sizes must be turned, bored and holed in the same manner as a German flute or piccolo, either with one key or more, according to the respective sizes, except the *F*, *G* and *A*, which are better if made a little flatter.

“ Fourthly and lastly, I do apply to English flutes or flageolets constructed with the improvements hereinbefore described, a key for producing the half-tones for which His Majesty was pleased to grant unto me the sole privilege and use, by certain letters patent, bearing date on or about the 14th day of May, in the forty-seventh year of his reign. And I do either make the aperture for blowing the said English flute or flageolet at the end or at the side of the upper joint or piece, and with a projecting mouth-piece or without. And I do, in the case of making the aperture in the side, so dispose of the tail of the before-mentioned key for producing the half-tones, as that the same shall or may be pressed by the lips during the time of performance when required. And I do consider the said placing or disposing of the said tail in order to produce the effect by means of the lips as here described to be one of the said improvements which constitutes the invention for which His Majesty hath granted me the hereinbefore first recited letters patent. And I do declare that my said improvements may be used together or separately, or any two or more of them together, in any such manner as shall be found advantageous or desirable in the use of the said English flute or flageolet.”

On the trial the attempt was made to show, by the speci-

fication, the utility of the improvements made ; but on objection to their being made, Lord Ellenborough ruled that the proper way of showing the value of the mode of operation was to call competent workmen, and plaintiff should ask them whether they could make the instrument by the mode therein specified. Two witnesses, experts, were then called to describe the improvements of the plaintiff's patent instrument. They both described it as a great improvement. In the old instrument, C natural on the third space was so imperfect and discordant a note that they always transposed music into another key to avoid it. By the patent flageolet also they could go as high as double F, which was a note beyond the compass of the old instrument. That it produced any other new note did not appear.

LORD ELLENBOROUGH held that this would be fatal to the patent, the ground on which it was granted having failed, the consideration on which His Majesty was induced to grant his patent not being truly stated ; it was granted on the faith that the patentee had truly stated the grounds on which he claimed that exclusive privilege. It was here stated that the plaintiff had by his improvement given new notes to the instrument, whereas, in fact, he has produced but one new note.

A compromise was agreed to, withdrawing a juror, both sides paying their own costs, and the plaintiff undertook to bring no new action.

Juror withdrawn.

Ex parte FOX.

Chancery, Dec. 9, 1812.

Improvement on a Patentable Machine.

Application and caveat.

The petitioners having applied for a patent in respect of certain improvements in steam engines, a caveat was entered under an existing patent, from which, it was alleged, the

new patent was borrowed, and with which it would not interfere, the affidavit of an engineer stating that they were not the same nor in any respect resembling each other.

The LORD CHANCELLOR. I take it to be clear that a man may, if he chooses, annex to his specification a picture or a model descriptive of it ; but his specification must be in itself sufficient, or, I apprehend, it will be bad. If the petitioners have invented certain improvements upon an engine for which a patent had been granted, and those improvements could not be used without the original engine, at the end of fourteen years the petitioners could make use of a patent taken out upon their own improvements ; though, before that period expired, they would have no right to make use of the other's *substratum*. My present opinion is that the patent must go ; but I will read the affidavits and see the parties and their models. I do not like to give costs in a case of this kind. I cannot say that the jealousy on the other side was unreasonable.

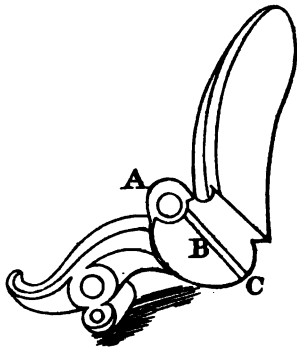
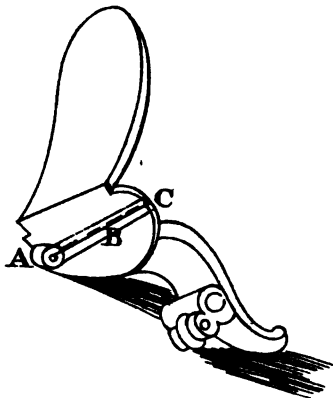
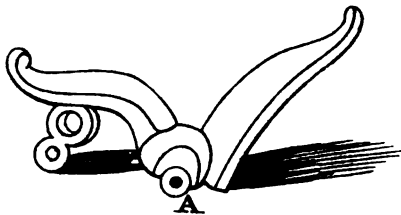
Ex parte GRANGER.

Godson says that in 1812 this case came before the Lord Chancellor. " A bankrupt having a patent for an invention, after having mortgaged the right, continued in the notorious use of the invention until his bankruptcy. The Lord Chancellor was induced to think that the right passed to the assignees under the statute, but directed a case for the Court of King's Bench ; which, however, was never argued." *Godson Pat.*, 2 ed., 225.

Ex parte DYER.

This case is cited in Hig. Dig. P. 126, from Holroyd Pat. 59, as having been decided in 1812, and as having held that, Where there are concurrent applications for letters patent for the same object, he who obtains the great seal first, by getting quickest through the various stages, will have the sole right at law.

No materials for a complete report have been found.



A.D. 1803.—N° 2722.

Manton's Improvements in Locks of Fowling Pieces and Small Arms.

NOW KNOW YE, that in compliance with and performance of the said provisoe, I, the said Joseph Manton, do hereby describe and ascertain the nature of the said Invention, and in what manner the same is to be performed in manner following (that is to say):

On the margin are three views of the improvement in the hammer; A, is the part which is next the touch hole, and is hollowed out and perforated with a small hole, so as to let the air pass through, but not the powder; B, is the seat of the hammer, which is grooved or hollowed out from the perforation to the edge C, so as to let the air out of the pan, but not the powder. Now the intention of this improvement in perforating the hammer, grooving or hollowing out the seat, is to let the air out of the barrel and pan; in putting down the wadding the powder in the barrel, by the air being allowed to pass, is forced into the perforated receiver A, so that the touchhole is always full of powder, and by these means fire arms of all kinds are prevented from flashing or hanging fire. These hammers may be applied to all kind of fire arms, and may be varied in size, form, shape, and manner of perforation, grooving, or hollowing, and manner of letting the air out of the barrel and pan. And I, the said Joseph Manton, do hereby declare and affirm that particulars above set forth do contain a full, true, and perfect description of the nature of the said Invention, and in what manner the same is to be performed.

MANTON v. PARKER.

Exchequer, N. P., July 6, 1814.

Utility. Novelty.

Patent for a hammer for locks of fowling-pieces, having a hole and groove to permit the escape of air in loading the piece, while retaining the gunpowder,—*Held*, void because ineffective.

Action on the case for infringement.

The patent was granted to the plaintiff July 6, 1803, for “a hammer on an approved construction for the locks of all kinds of fowling-pieces and small arms.”

See specification and drawings.

Both the novelty and the utility of the plaintiff's invention were involved in the issue ; but the question of utility was the one on which the case chiefly turned.

Dauncey, for the plaintiff, stated that Mr. Manton had obtained a patent for the discovery of a new principle to be applied to the locks and hammers of guns. His discovery was that if the air-hole in the lock, which is described in the specification, should be made, the purpose would be answered, and consequently that it was an invention attended with all the conveniences the exclusion of air could produce, and none of the inconveniences of the powder being driven out with it. If this had been invented before, then undoubtedly Mr. Manton was not the first inventor ; but there would be no difficulty in proving that the invention was Mr. Manton's, and that it had been adopted by the defendant. He called witnesses whose testimony was to this effect.

Scarlett, for the defendant, said that all with which the jury had to do was the originality of the invention, and the adaptation of the means to the end ; and further whether the invention was of use to the public. If a man takes out a patent for an original invention, and he claims more in his specification than is original, or he has a right to, the patent is void for the whole ; therefore, if any one of these

specifications shall turn out not to be original ; if the lip, the groove or the hole should either of them be his invention, but if there is one or either of them that is not his invention, in that case, as the specification gives reason to the public to suppose that he claims the whole, the patent is void, and he cannot maintain his action. He then contended that the patent was bad from the evidence produced for the plaintiff, showing that a groove communicating with the touch-hole existed before ; and contended that the plaintiff ought to have limited his patent to the invention of what was new and unknown before. If hammers before existed in which grooves were made half way, the inventor should have stated that he had carried them the remaining part of the way, instead of which he claims the groove as his original invention, and upon that ground his patent is void. He has described his object to be to make a hole large enough to admit the air, but not so large as to admit the powder ; by which means the air is let through, and the powder kept in the touch-hole. Now, if the hole is for the purpose of letting the air pass through, it follows that in a damp day it will admit moisture ; and the effect of moisture upon powder would be to make the gun hang fire, or probably miss fire ; but it will be proved that almost the moment after Mr. Manton procured his patent, he found it essential to make the hole large enough for powder to pass as well as air. If a man takes out a patent, professing that it is to do a certain thing, and it is found by experience that it will not produce the effect designed, but that to make it of utility there must be a deviation from the specification, the patent is in that case wholly void. That rule was laid down in the case of *Turner v. Winter* (*ante*, p. 43), where all the doctrine upon the subject is to be found. It is there stated that if a man takes out a patent for several things, some of which are original and some not, or if there is anything which will not answer the end proposed, the patent cannot be sustained.

Witnesses on the part of the defendant were called to prove what had been stated, and among other things it was shown by experiments made in court that the powder

passed through the perforated lip, by its own gravity, without the least difficulty.

THOMPSON, C. B. The powder passes through the same hole as the air. It seems to me, therefore, that the utility of this invention and the purpose of this patent wholly fail ; for the purpose of the hole, as described in the specification, is to let the air pass through, and at the same time secure the powder from passing through. That of itself would be an answer to this action. Besides, on the other part of the case, the evidence is pretty strong.

The plaintiff was nonsuited.

MANTON v. MANTON.

Common Pleas, N. P., June 20, 1815.

Novelty. Utility. Limitation of Claim in Specification. Evidence of Novelty. Weight of Evidence.

Patentee must show that his invention is new and useful.

It is necessary likewise that he should show that he has accurately explained the nature of his invention in his specification, separating that which is new from that which is old.

Testimony of an expert that he had never before seen a similar construction to that in issue, *Held prima facie* sufficient evidence of novelty.

The testimony of one witness that he had previously seen and practised the application of the principle involved—*Held* to overbalance the statement of fifty that they had no knowledge of it.

Issue out of Chancery.

The plaintiff complained of the infringement of two patents, one granted to him July 6, 1803, for a hammer upon an improved construction for the locks of fire-arms, which had already been litigated in the last preceding case, *Manton v. Parker* ; and the other dated September 6, 1806, for an improvement in double-barrelled guns.

The specification of the earlier patent is set out at p. 187. The second was as follows :

"My said invention is an elevated top piece or top rib for double gun barrels, which said top piece or top rib must be made high at the breech ends of the barrels and tapering off to the muzzles. The intention of making the top piece or top rib high at the breech ends of the barrels is to give the barrels elevation to throw the centre of the charge of shot up to the object aimed at at the distance required. I should recommend the top piece or top rib for general shooting to be made so high above the surface of the barrels at the breech that a double gun will throw the centre of the charge of shot up to the object aimed at at the distance of forty yards. But if a double gun is required to throw the middle of the charge of the shot up to the object aimed at at a greater distance, the top piece or top rib must be made still higher above the surface of the barrels at the breech to give the barrels more elevation. This improved top piece or top rib may be worked solid out of the barrels, or brazed, soldered or fixed on, or made hollow, or part soldered and part hollow, or may be partly continued on the barrels, so there is sufficient length to direct the eye to the object. This elevated top piece or top rib may be made of iron, steel, brass or any metallic or other substance that will answer the purpose, and may be grooved out in the usual manner, or made flat, round or any other shape or form, according to fancy, so that it is made sufficiently high above the surface of the barrels at the breech to give the barrels elevation to throw the centre of the charge of shot up to the object aimed at at the distance required. The advantages of this elevated top piece or top rib are that sportsmen will be less liable to shoot under their game, and the aim will be more direct and less confused, and that a light double gun can be made to throw the middle of its charge of shot up to the object aimed at at the distance required, and also that it will not be necessary to bend the barrels upward, nor to make them clumsy at the breech, the elevation being given to the barrels by this improved top piece."

Lens stated the plaintiff to be the first and sole inventor of this improvement upon the hammer, the effect of which was that of producing a better or more perfect way of load-

ing fowling-pieces and small arms, without the danger of their hanging fire, and in such a way as to produce a certain explosion. It is a material object to have the powder in the barrel communicate as speedily as possible to the powder in the pan, for, if there is any disunion, the powder in the barrel will not take fire so instantaneously as if its communication was uninterrupted; the piece will either not go off at all, or it will hang fire. Whatever, therefore, brings about such an unbroken union must be a desirable object. In ordinary cases before this invention, when the wadding was rammed down there was always a quantity of compressed air within the barrel, which was forced out at the touch-hole. It was easy to let the air escape, but it was desirable that it should carry none of the powder with it, as that would make an actual discontinuance between the powder at the bottom of the barrel and the powder in the pan. To remedy this defect, the invention of the plaintiff is very simple: it is to have an aperture in the lip or cap that goes over the pan so small that, when the cap is down, the compressed air shall escape through the aperture, without discomposing the powder, but leaving the powder where it was. If the aperture is not very small, not only will the air be forced through, but the small grains of powder will be carried with it. It will be proved that the aperture is well adapted to produce the effect intended. This appears to be a very easy matter; it is difficult to conceive how it should not have been found out before. It often happens that the merit of an improvement consists in a very small addition to the thing to which the improvement is applied. The aperture is very fine and minute, but it is sufficiently large to let the air escape, and yet small enough to prevent the powder from passing. The object is to have this smaller aperture precisely where the lip closes upon the touch-hole; and this invention has answered every purpose for which it was intended. Proof will be made that before Joseph Manton had his patent, there were continual inconveniences from fire-arms not going off, or hanging fire; and that since this invention there has been a more certain dependence upon the explosion taking place and the piece neither

missing nor hanging fire. The defendant, in imitating this invention, has not made the aperture precisely in the same line, but he has produced the same in an oblique line. When a man sets about to imitate the invention of another, he will not do it exactly in the same way. Instead of making the aperture through the pan, the defendant has made a small angle passing it obliquely. This is the nature of the infringement complained of. The question will be whether this is a new invention, or whether it has existed from an antecedent time. In the latter case, the plaintiff can claim no merit. There may have been something of this kind, but no such aperture as the one invented by the plaintiff has ever before been in use. There may have been hammers made with lips, but those lips were never perforated to produce the effect produced by this invention. With respect to the other patent, which gave to the plaintiff the merit of having invented an elevated top piece for double-barrelled guns, it was observed that if the point of view in a double-barrelled gun is carried on the same level, the person firing off the piece will send the shot in a line horizontal with the mouth of the barrel; the consequence will be that if the object is at some distance, and the contents of the barrel are carried in the same line of direction, the charge will probably go below the object aimed at. For, by the power of gravity, all heavy bodies incline downward; therefore, when a gun is fired at any object beyond a certain distance, the ball or shot forms a curve, and has an inclination to sink nearer the earth. The shot will be carried in a straight line as long as the first impetus operates; but when it in the least degree ceases, the shot will, by the principle of gravity, sink below the object. It was, therefore, important to contrive a means by which the person taking his aim should be able to throw the shot higher than it would be carried by his own sight along a level plane. Now that is only to be effected by making the line of sight extend along an inclined plane; by the elevated top piece, the point of sight is carried in a different line, extending somewhat above the object at which the aim is taken, which allows for the descent produced by the prin-

ciple of gravity, and the shot is made to proceed in a more elevated line, so as at a certain distance to sink, and by that means meet the object sought to be struck. The thickness and consequent elevation of the breech in double-barrelled guns gave an additional weight, which was considered a great inconvenience. It therefore became desirable to lessen the weight, which could only be done by making the breech of the same thickness as the muzzle ; but the consequence was that the line of direction was varied. In obviating this difficulty is the great merit of the present invention ; for instead of having each barrel thick all round at the breech, the same effect is produced by what is called an elevated top piece or top rib. Till Joseph Manton invented this, the inconveniency of using double-barrelled guns was universally felt. This invention the defendant has also imitated and sold, in defiance of the patent. The question will be whether the defendant has infringed these patents. It will be shown that he has infringed both of them ; that all the purposes for which the patents were obtained have been attained by the inventions for which they were granted ; and that before Joseph Manton introduced these inventions to the public, and obtained his patents for them, the same effects had never been produced by any similar methods. [The counsel called several witnesses to speak to the value of the patents, and also that they had been infringed by the defendant.]

Best, for the defendant, said it was not for him to dispute whether the principle upon which the plaintiff has made his guns was a good principle or not : whatever advantage there might be in those guns, he should prove that the principle was not new. It was not doubted but many persons might be called who never shot with such a gun before ; but although many gentlemen have never seen these guns before, yet if one is called who has, there will be an end of the patent. That will be the defence. Here are two distinct inquiries to which to direct the attention ; one with respect to the gun-lock, the other with respect to the rib on the top of the gun. First, the gun-lock as exhibited in the plaintiff's specification. It will be shown, from the evi-

dence as it stands, that the patent cannot be sustained ; but if that should not succeed, I have a case behind, by which I shall prove that this gun-lock is "as old as the hills." It is important that a person who takes out a patent should not take it out to a larger extent than the invention warrants. A person taking out a patent is to state that which is new, distinguishing it from that which was known before ; he is to claim his invention for so much as is his own, and no more ; he has no right to anything beyond what he adds to the stock of public knowledge. If he could claim more, he would be taking from the public, and appropriating to himself what the public had before a right to the enjoyment of ; therefore, if he takes his patent out too large, the patent is void altogether. If, therefore, the plaintiff has taken out his patent for too much, or has described it indistinctly, in either case his patent will be void. Now it is clear, upon his own evidence, that he has taken out his patent for too much. He, by his specification, not only claims the perforation, but he claims the larger hole called the cup. Is that new ? One witness says that he has made scores and scores of them. If a man claims an invention for a perforated lip, a lip being a thing well known before, and used before, he must state that he claims his patent for the perforation of a lip, whereas this is a claim for the lip itself ; which, according to the plaintiff's own evidence, the public were in the habit of making before. He claims also the groove that runs across the seat of the hammer. Mr. Egg tried the grooves, and left them off ; other witnesses speak of the groove as a thing well known. There is only the perforation that is new : the commencement of the groove at the lip is old ; the groove which passes from the perforation to the outer extremity is old. How is it possible that this patent can stand, even on their own evidence ? for in the specification, the plaintiff insists that the whole is new. There is another thing : he must so describe it that a workman may know how to make it. The size of the hole that is to let the air out but not the powder is not described. The groove is the most material part of the invention ; it is that which is to carry into effect the whole. It is so

described that, without the groove, the invention would be of no use. The plaintiff, by obtaining this patent upon so large a scale, would have a right to maintain an action against a person for doing that which any of the public have been long entitled to do. [Gibbs, C. J., said that no doubt plaintiff must prove the novelty of every part of that to which his patent applied.]

The plaintiff claims the seat of the hammer grooved or hollowed ; the grooving or hollowing out we have not got. The two things are as different as possible ; the grooving in the specification is to let the air out of the pan ;—ours cannot let the air out of the pan, for the air never gets into the pan, it is carried off by another course. It would be a very difficult task to point out which of the two is best, but common sense says they are not the same. The other question will be easily disposed of when we come to the specification with respect to the rib ; but the plaintiff has taken out his patent for an invention which he never invented. It will be proved that this pretended invention was used before Joseph Manton was born, or at least long before he ever thought of taking out this patent. [Counsel then produced some locks, which were ordered by the Lord Chancellor to be exhibited upon the trial of the issue directed by the Court of Chancery to decide the question between the parties, in which he showed the cup, the lip, and a perforated lip with a communication to a sort of magazine, which he would prove had been in use many years, and that these kind of locks had been made commonly at Birmingham upward of thirty years ago.] The groove in the present case goes to the end of the hammer, while the groove in the other goes only half way. This makes an end of the question, because he has taken out his patent for the cup, the lip and the perforated lip, all of which were before in possession of and used by the public. He has carried the groove the whole way, which before went half way ; but where a man has taken out a patent for carrying a groove the whole way through the hammer to the extremity of the pan, the practice before having been to extend it half way, he cannot in such case maintain an action for the infringe-

ment of his patent. It will be proved that, whether the perforation is new or not, it is not important. Nothing is said in the specification about the cup; the only things, therefore, to be attended to are the perforation and the groove, and both of them are shown to be known before this patent was taken out. What he has taken out his patent for is the perforation and the grooving, and it will be proved that they are old, and that all is old for which the plaintiff claims his patent. It is in evidence that the only novelty which the plaintiff calls an invention consists in having a solid piece: if a high breech and a low sight were in use, that is the whole of the principle. The principle of a rifle-gun is exactly the same; but a gun made for Lord Berkeley twenty-six years ago, and made by the defendant, will be produced, which is precisely upon the same principle for which the plaintiff has taken out his patent. It makes no difference whether the inclined plane is grooved or flat. The antiquity of the principle will be proved, and other pieces upon the same principle made before the patent will be produced. As to the law upon this subject, the plaintiff declares in his specification that his invention is an elevated top piece, or top rib, for double-barrelled guns, which must be made high at the breech and tapering off to the muzzle. All the plaintiff has done is that he has applied to a double-barrelled gun what had been before applied to a single-barrelled gun. If a man took out a patent for a particular shoe-buckle, could the same principle be applied to a knee-buckle, and a new patent be taken out for it? Clearly not. [Counsel then called evidence in support of the defence, to show that the inventions were old, and that the specifications were insufficient.]

Lens, in reply, said that the whole of the case on the part of the defendant could be answered by a few observations. The counsel for the defendant had said that he should prove that there was no new invention, but that it was "as old as the hills." If he had proved that, there would have been an end of the question; but he found his challenge too bold. He states that we have claimed three things when we are only entitled to one; now we do not

claim the exclusive right of making grooves in hammers, they have existed long before our invention ; we do not claim the exclusive right of making lips, or hollowing out cups, they too have been of long existence ; that which we claim is that we have found out a way by combining and using these things which were before invented, with something that we have invented, of producing an effect which was never before attained. That which we claim is the mode of carrying off the air, which before obstructed the ramming down the charge, and caused the piece to miss or hang fire, by introducing an aperture not sufficiently large to admit the powder through it, but so small as to let that quantity of air escape which ought to escape without the powder following it. By this invention the air passes through the groove in the seat of the hammer, and goes out at the small hole at the end. It is this in which we say our invention consists. He says all this was done long ago ; that the old form was just as good ; that the public have obtained nothing by the patent : then surely he comes into court with a very bad grace, when he comes endeavoring to imitate that invention which he so traduces. Whatever may be the utility of this aperture, ours is the merit of the invention. We have been the first who have adopted an aperture to carry off the air, but not large enough to carry the powder through, or let the air come back in a humid state. The whole of their case goes to show that this mode existed before our patent ; but they have failed in their endeavor. If the principle existed without being known, that is no answer to our case ; the attention of the public was never drawn to it till we took out our patent. As to the second patent, it is an invention the effect of which is to throw the shot higher. It is admitted that the specification might have been more philosophically expressed ; it has been said that it is calculated only for a distance of forty yards, and to leave you in ignorance, suppose you wanted to kill at fifty or sixty yards ; but it is applicable to both these distances or to any intermediate distances ; you may adopt the principle according as you want to apply it. The specification takes the line of distance at forty

yards as the average distance, being neither very long nor very short ; if you want to kill at sixty yards, you must have the elevation accordingly ; the true application is to be learnt by experience, and the specification is so drawn that any man may easily apply the principle. If these elevated tops are proved to have existed in the same state, and that nothing has been done but to give them a more regular disposition, certainly the patent cannot be supported.

GIBBS, C. J. This action is brought against the defendant for having, as the plaintiff insists, violated two patents. Before I state the case, I will answer the question of my learned brother. He asks, why did the defendant, if he meant to rely on the old mode, vary from it and assimilate his mode to the plaintiff's ? The answer, if he is right on the merits, is this : I did it because I had a right so to do, because the principle of the old fashion prevented this from being a new invention, and therefore I have a right to avail myself of all the improvements he has made. In order to support a right to the exclusive enjoyment of any invention, it is necessary that the party who takes out the patent should show that the invention is new, that it was unknown to the trade and to the world before, that it is not only new, but that it is useful to the public ; and it is necessary likewise that he should show that he has accurately explained the nature of his invention in his specification, separating that which is new from that which is old, so as to enable a person of tolerable skill to make the thing by means of his specification.

I stated that there are two patents which the plaintiff complains of being violated,—the one with regard to the lock, and the other with regard to the elevated top piece ; and I should state that if this was ever practised before Mr. Joseph Manton took out his patent, he cannot support his patent for it, and it appears to me to have been proved beyond all doubt that this mode of varying the sight by means of an inclined plane has existed long before Joseph Manton's patent. It has been proved that long ago numberless guns upon this principle were sent to the East Indies, and that some were used in this country. There is

no doubt that the gun produced by Colonel Berkeley was made long before Joseph Manton's patent was taken out ; and if it was, then it appears that the mode of making guns upon this principle was well known, and that he could have no right to take out a patent for it as his own invention. In truth, it appears clear that guns upon this principle were made by John Manton, the brother of Joseph Manton, while Joseph was an apprentice to him. I have no scruple in saying that if that gun was in use before the patent was taken out, Joseph Manton cannot support his patent for it as a new invention.

Then it remains to be considered whether the patent for the perforated lip and hammer can be supported. Now it plainly appears that the lip was of an earlier date than Joseph Manton's patent. He does not pretend to have invented the lip, but he says that by the old mode a mischief prevailed which he has provided against, and that he has greatly improved the guns to which he has applied the invention, and they call witnesses to prove that this is a new and useful invention. The first witness, a man of considerable experience, had never seen any locks with the lips so perforated. *Prima facie*, that is good evidence ; but when the question is whether this had existence previous to the patent, fifty witnesses proving that they never saw it before would be of no avail if one was called who had seen it and practised it ; and if any one person has ever done the same thing, Joseph Manton cannot be entitled to his patent. It is admitted that John Manton has sold guns which, if this patent can be supported, are in breach of it. The several gentlemen called as witnesses concur in saying that after they applied this improvement of the perforated lip, the utility of which is that it lets out the air and not the powder, their guns went off easier, and never hung fire, and there is no contradiction to that part of the case ; but the defendant insists that this invention, be it good or bad, useful or useless, is not new,—whatever may be its merits or demerits, the defendant says the invention is not the invention of the plaintiff. One witness is called who says that there was a hole in the lip of a hammer (which was pro-

duced) when he lived with Mr. Smith, a gunmaker, in 1802, and he swears that the hole was made in the lip for the purpose of preventing the obstruction in loading produced by the lip ; now, if that was so, it prevents this from being a new invention. He states that lips were made with this hole at the time he lived with Mr. Smith, and although it passed through the solid part of the pan, yet it would be sufficient to prevent the claim of Joseph Manton from being an original one, because it would be an invention the principle of which was well known. He says Mr. Smith told him the hole was for the purpose of letting the air out of the barrel, and it would do away with Joseph Manton's patent. I may as well state now that Mr. Smith has been called to give this witness a direct contradiction, and to prove that he never did make this hole with a view to letting the air out, but that it was merely made for fixing a screw. If it was intended to receive a screw, there would be a worm ; he says there was a worm, but that it had been bored out. The man swears most positively that there never was any screw or worm, or female screw, belonging to it ; he says it was to obviate the complaints with respect to the obstruction in loading. These two persons contradict each other in pretty direct terms. Smith states that he had no conversation with his man to the effect stated by him. Upon his cross-examination he says he has often declared that this was not Joseph Manton's invention, but he states that was only with a view of recommending his own merchandise. He swears that he did not tell Mr. Cumden that he had actually made a perforated lip for the purpose of making the air pass through, thirteen years ago ; but Mr. Cumden is called to contradict him, so that I should think that a great deal of attention cannot be paid to the evidence of a man whose testimony is so deeply invaded as Smith's is. But upon this part of the case it is material we should attend to the evidence of Mr. Furtado. He says he purchased a gun of Mr. Smith with some new principle, which was a hole facing the touch-hole, for the purpose of the wadding going down easy ; he says he purchased it on the representation of Mr. Smith that in other guns there

was a difficulty in loading, which in this was removed by a hole facing the touch-hole. Now, Mr. Smith must have represented to him that he was selling him a gun in which the mischief was actually removed by the very means by which this patent professes to obviate the inconvenience. He will not pretend to say whether it was in 1802 or 1803 ; but he sold it again, because it did not answer the purpose for which he purchased it. It appears that Smith did sell him a gun upon the principle of excluding the air by means of a hole facing the touch-hole, but the case does not rest there. They bring a witness who produces a lock upon the same model as the locks which he says he made twenty-five, twenty-six, or twenty-seven years ago ; he says he made it as nearly alike as he possibly could. You observe there is a lip, a hole and a groove, and one of the former witnesses told you that the manner in which they made their pans before the plaintiff's patent was taken out was by suffering the air to escape through a hole made for the purpose. If the evidence you have heard on the part of the defendant is correct, it follows that the principle of Joseph Manton's patent was made use of over and over again before his invention.

The witness tells you that he made a great many locks upon the principle of a perforated lip, and that he continued making them for three years together ; he says that the hole and the groove were made for the issue of the air, so that the object of the plaintiff's patent and the means of effecting that object were well known. He tells you that the principle was well known twenty-five years ago ; that they felt the evil complained of, and prevented it by a perforated lip that is in substance the thing for which Joseph Manton claims the merit of his invention.

The only question for your decision is whether the invention for which Joseph Manton has taken out his patent for the improved gun-lock is a new invention. Certainly on the part of the plaintiff they call witnesses who are experienced in the trade, who had never seen anything of the kind, and that evidence launched their case ; but on the part of the defendant, it appears to be clearly proved that

the principle was a well-known principle. If any one man made these locks, and was in possession of the secret of making them upon the same principle as Joseph Manton's locks, there would be an end of the patent. You find Mr. Furtado purchasing a lock of the same description, and you find a man making locks of the same kind twenty-seven years ago. If so, this patent which Joseph Manton has taken out cannot have been for a new invention. It is for you who have heard the evidence to say whether he be or be not the inventor of this lip with the perforation. If you think it was not practised before his patent, then he is entitled to your verdict; if you think the principle was well known, and that this man at Birmingham made locks of the same description, and on the same principle, twenty-seven years ago, in that case the defendant will be entitled to your verdict.

Verdict for defendant.

WOOD v. ZIMMER.

Common Pleas, July 1, 1815.

Omission from Specification. Novelty. Prior Use.

A patent is void if the specification omits any ingredient which, though not necessary to the composition of the thing for which the patent is claimed, effects a more expeditious and beneficial mode of producing the manufacture.

The public sale of that which is afterward made the subject of a patent, though sold by the inventor only, makes the patent void.

Issue out of Chancery to try the validity of a patent.

The patent in question was obtained by Jacob Zink and others, dated January 20, 1812, for a new mode of making verdigris, and was held by plaintiffs as assignees.

The specification was as follows :

“That the materials, the substances and the ingredients of which this composition is prepared, chiefly consist of, 1. Pure copper ; 2. Acid ; 3. Alkali. Of these are made, first,

a saturated solution of oxyd of sulphate of copper, and, secondly, a solution of either vegetable or mineral alkali; which two, properly combined and mixed together, will create and produce the superior verdigris, for the exclusive manufacture of which the said patent has been granted. That the first, the saturated solution of oxyd of sulphate of copper, is made by causing a furnace to be constructed, on which is placed an iron pot or vat, somewhat larger than another of copper, to be put into it; the latter, notwithstanding, so large as to contain 300 gallons of water. The dimensions of the iron to exceed that of the copper pot or vat inasmuch only that on placing the last into the first a space is to be filled up or stuffed with sand, fixing in this manner firmly the copper into the iron vessel. This being properly filled up, take, first, from ten to twelve pounds of pure copper, cut small, or granulated, with thirty pounds of oil of vitriol, and put them in said boiler; then proceed to light the fire, and heat the furnace. On the oil of vitriol getting warm, add to it eight pounds of pure water, and let all these together foam up and boil till the requisite calcination becomes effected, and the matter in the boiler gets dry, which it will show itself to do by an apparent discontinuance of evaporation and when no more steam issues from it. Take then this prepared oxyd of sulphate out of the boiler, and go on with making as much more of it (after the manner above described) as will be sufficient to saturate a quantity of about 300 gallons of water, which water take care in the mean time to have at hand, in a proper tub, for the purpose of dissolving in it the oxyd of sulphate, which will be best done thus: Suspend by a rope or pulley a sufficiently large piece of stout canvas, cut round and round (so as to fall rather concave), to a ring or hoop of copper, having an arm or handle of the same metal, to which the rope above is fastened. Lay on this apparatus the prepared powder, and let the same thus, by assistance of rope and pulley, be alternately plunged in and drawn out of the water underneath, stirring the same continually. Having dissolved in this manner as much of the oxyd of sulphate as will saturate the stated quantity of water, the solutions .

will be prepared. The other is simply that of 150 lbs. of alkali dissolved in about 300 gallons of water, for which take care likewise to procure in time a proper sized tub. Now, as already said, on bringing these two liquors together into one or more pails, so much of each as to equalize their respective strength, which is seen by the color and appearance of the liquors, and known by experience only, and therefore cannot possibly be described, the result will prove that this mixture and combination creates and produces the wished-for article. However, it is then not yet perfect ; it requires, after this its first creation, to be freed, first from the water it contains, next cleaned and purified, and, last of all, to be made perfectly dry. For the first purpose, it will save trouble and expense, if, instead of pails for mixing the two solutions together, there be used, when completing the production, a proper number of tubs, containing each ten gallons of water. Farther, that there be constructed an equal number of stools or stands, to the top of each of which there must be loosely fastened proportionate pieces of good stout canvas to lay the composition on ; and through which the water adhering to the same, when first slooped out of the tubs, is strained, to facilitate which the composition may, while laying on those drainers, be stirred about with a wooden spade. This done, replace the composition in the same tubs, and throw in each tub about six gallons of water, with which stir it about once more, in order to cleanse and also to free it from the alkali. This having been properly done, it must be spread a second time on the drainers, and stirred as before, till it is quite freed of all watery parts ; when, finally, it must be put into canvas bags, covered over with flannel, and thus packed up. The remaining moisture is to be squeezed out as much as possible by means of a press ; where, after being laid on boards or laths, exposed to the air, it is left to dry. Farther, the composition will become perfect, and prove, in quality and virtue, far superior to any manufactured in France, which has hitherto always been preferred and esteemed inimitable."

. The verdigris produced by plaintiff was of a brighter

green than the French, and superior to it. A chemist gave evidence to the utility and novelty of the invention ; and a workman employed by the patentees proved that by following the directions in the specification the manufacture might be produced ; that he had manufactured it himself from the description.

The proofs in support of the defendant's case were testimony that the same article which was sold under the name of "British Verdigris," and for which the patent had been obtained, had been previously sold under the title of "Dutch Imperial Green," the ingredients of which the two articles were composed being precisely the same ; and that the inventor had purposely withheld one of the ingredients in the specification upon which the patent was procured, alleging that "if he stated the whole the public would know the secret." This witness being called to state what the ingredient was said he was bound in a penalty to his partner not to divulge it. The court, however, said they would not suffer the witness to shelter himself under this in a case where the interest of suitors was concerned ; and he finally stated that in addition to the articles contained in the specification, the patentee used a certain proportion of aqua-fortis, which he always put into the boiler himself unknown to his workmen. The effect of this was to dissolve the copper more quickly and produce a finer green. Another witness testified that he had purchased some of the British verdigris from the bankrupts long before the patent was taken out.

GIBBS, C. J. The objections to this patent are, 1, the omission of aqua-fortis in the specification. 2. The article was not a new one at the time of the patent, inasmuch as the patentees sold it previously ; that they gave it to the world without a patent, and cannot afterward obtain a patent. In answer it is said that this patent makes verdigris, and is therefore sufficient. The law is not so. A man who applies for a patent, and possesses a mode of carrying on that invention in the most beneficial manner, must disclose the means of producing it in equal perfection, and with as little expense and labor as it costs the inventor himself.

The price that he pays for his patent is that he will enable the public, at the expiration of his privilege, to make it in the same way and with the same advantages. If anything which gives an advantageous operation to the thing invented be concealed, the specification is void. Now, though the specification should enable a person to make verdigris substantially as good without aqua-fortis as with it, still, inasmuch as it would be made with more labor by the omission of aqua-fortis, it is a prejudicial concealment, and a breach of the terms which the patentee makes with the public. With respect to the second objection, the question is somewhat new. Some things are obvious so soon as they are made public. Of others, the scientific world may possess itself by analysis. Some inventions almost baffle discovery. But to entitle a man to a patent, the invention must be new to the world. The public sale of that which is afterward made the subject of a patent, though sold by the inventor only, makes the patent void. It is in evidence that a great quantity was sold in the course of four months before the patent was obtained, and that the bankrupts were in the habit of selling this manufacture.

Two questions were left to the jury : 1. Whether aqua-fortis was used by the inventor as an ingredient in the verdigris ; 2. Whether the invention was in public sale before the patent. In either case his lordship thought the patent void. •

The jury found both questions in the affirmative.
Verdict for defendants.

BEAUMONT v. GEORGE.

Chancery, Aug. 10, 1815.

Jurisdiction of Law and Equity. Licensee's Right of Action.

A patent for an improvement does not restrict use of the machine in its original form.

Whether a patent is valid is a question of law ; equity will entertain it only in a few special cases.

Not only a patentee, but also licensees from him may recover in equity damages for violation of a patent which has been established at law.

Injunction against infringement continued under the circumstances, until the plaintiff should have time to establish the validity of the patent at law ; but defendant ordered to keep an account, and to grant plaintiff an inspection.

Motion to dissolve an injunction.

The proof showed that a patent granted to one Constant, dated February 27, 1812, for a method of refining sugar by means of wood or other vegetable charcoal, had been purchased by Beaumont and Wackerback ; that another patent had been granted to Messrs. Martineau, dated May 8, 1815, for effecting the same purpose by means of animal charcoal ; that the parties had agreed for advancement of their common interests to unite their patents.

The specification of the Constant patent was as follows :

“First, I do prepare the charcoal of wood by washing the same with water, which clears it of some impurities supposed to be of a smoky or oily nature, and I do then grossly powder the same along with a little water, by means of a mill or otherwise, and I do then grind the same very finely, with the addition of a considerable quantity of water, by means of a mustard-mill or other similar well-known machinery or apparatus for grinding or levigating ; and in this finely powdered state I do carefully wash the said charcoal, and draw off, decant or separate the greatest part of the water by means of a filter or strainer or otherwise ; and I do form the said charcoal, while in the consistence of a paste, into masses of any convenient size for keeping, but in preference about the size of a large cheese ; and I do dry the same in the sun or by a moderate temperature, after which the same may be kept for use in casks or other fit packages ; and, secondly, for clarifying or refining Muscovado or clayed or soft sugars, I do charge my boiler with a sufficient quantity of water, or of water containing sugar, and after heating the same to a considerable degree, I do add the sugar intended to be clarified or refined, taking care, by due stirring or agitation, to prevent its burning to the bottom of the vessel ; and so soon as the sugar so added hath been entirely dissolved, I examine the specific gravity of the solution by

the floating instrument called the hydrometer, or by any other well-known means ; and I do, by a due addition of more sugar or more water, as the case may require, bring the solution to that specific gravity which shall or may be best adapted to the process of clarifying or refining, as is hereinafter set forth and declared ; and in order the more speedily and precisely to determine and express the specific gravities of such solutions of sugar, as from time to time I may have occasion to make, I do construct, use and apply an hydrometer, made, by preference, of glass, with a bulb or ball, having a loaded part beneath and a cylindrical stem above ; and I do make the said stem of such dimensions or degrees as to admit of forty equal divisions or degrees to be marked thereon, of such magnitude, with regard to the intervals or parts of the stem between each several division or degree, and the division or degree next and immediately contiguous or adjacent thereto, that every one of the said intervals or parts shall respectively be equal in bulk to one two hundred and twenty-sixth part of the bulk of the whole immersed part of the said hydrometer, when floated in pure water ; and I do so adjust my counterpoise, and do so number the said divisions or degrees, that the uppermost stroke or mark of division shall be numbered 0, and shall coincide with the surface of pure water when the instrument shall be suffered to float therein ; and that the stroke next following beneath the said uppermost stroke shall be numbered 1, and shall coincide in like manner with the surface of an heavier fluid than water ; and the next lower stroke beneath the last-mentioned stroke shall be numbered 2, and that the successive strokes shall be regularly numbered 3, 4, 5, 6, and so forth as far as 40 ; and I do declare, that whereas the principles and method of constructing hydrometers or floating instruments are well known, and the forms and relations of the parts thereof are susceptible of great variation, I have described the hydrometer I make use of, not because or in consequence of any supposition that the same is or may be the only instrument which can or may be used in my said method, but because the same is preferred by me, and my descriptions herein set forth as to

the expression of specific gravities are adapted thereto, and that I do accordingly consider it to be unnecessary for me to give any more particular instructions concerning the same ; and, further, that in the clarifying or refining of soft sugars, in case the same be of ordinary or coarse quality, I bring the boiling syrup to the strength or specific gravity of twenty-eight degrees of my hydrometer, or in case the sugar be of good quality, I bring the boiling syrup to thirty degrees, or in case the sugar be clayed or white, I bring it to thirty-two degrees. And I do declare that the utility and advantage of regulating the specific gravity of the syrups as aforesaid do arise from the considerations that in case the syrup were too thick or heavy, the clarifying, by means of the prepared charcoal as hereinafter directed, would prove less efficacious ; and that in case the syrup were too thin or light, it would be needful to evaporate for a longer time than otherwise, and the said continuance of evaporation would more or less injure the color and beauty of the sugar when clarified ; and further that as soon as the syrup shall have been made and brought to the proper specific gravity as aforesaid, I do add to the boiling fluid a quantity of charcoal, prepared and pulverized as hereinbefore directed, to the amount of from five to ten pounds of charcoal for every hundred-weight of sugar, which shall or may have been so dissolved in the water in the boiler ; and that I do take care to use a greater quantity of charcoal for coarser sugars than for such as may be finer, and that in this particular the operator cannot fail to succeed, although his judgment and knowledge with regard to the quantities of prepared charcoal to be used with the different qualities of sugar will necessarily improve by practice, and it is not possible by written instructions to point out such smaller variations in the processes as will by such practice be so indicated. And further, that I do stir up and mix well together the said charcoal and the syrup, and thereupon I do allow the same to repose for a short time, and then do urge the fire in order to make the syrup boil up as speedily as possible ; and that when the same shall have arisen by ebullition, and arrived nearly to the point of boiling over,

I pour in the usual finings of white of eggs or blood, or other albuminous material, and do well and effectually mix and agitate the same, after which I again cause the syrup to rise by ebullition, in order that the coagulated albumen may rise in the form of scum along with the charcoal and the impurities of the sugar ; and, upon this event having taken place, I allow the whole to remain at rest in a very gentle heat ; and that so soon as the charcoal has accurately risen to the surface, I skim off the same, and when no more charcoal appears to remain, I do carefully filter the syrup ; and, moreover, that so soon as the quantity of Muscovado, or other soft sugar intended to be clarified, shall have been treated as aforesaid, I collect all the charcoal obtained from the skimmings, and do add thereto a sufficient quantity of water to allow the same to be well heated, with continual stirring to prevent its catching or burning to the bottom, and after the same has risen by boiling, I do put out the fire and throw the charcoal upon the filter to separate the weak syrup ; and when this last has been well separated, I wash the charcoal in pure water made boiling hot in the boiler, and I do make use of this water in the subsequent processes of solution and clarifying of sugars. And I do further declare that in case it should, from any cause or circumstance, be inconvenient to wash the charcoal immediately after filtration, no change will take place, by fermentation or otherwise, during the space of one month, if the same should be kept so long. And I do further declare that as part of my said invention or method, I have constructed and do use a furnace for heating, boiling and evaporating syrups, in which I do not only avail myself of doors and registers to the grate, chimney and ash-hole, as used in other works for regulating, damping or extinguishing the fire ; but I do also in particular, and as a peculiar and important part of my said invention, construct and use a plate of metal or other fit material, which can be slided or moved in and out of the fireplace, or otherwise changed as to the situation thereof, by motion upon bearers or slides, or rollers, or trucks, or wheels, or other similar supports, or upon a joint or axis, or pin, so that the same plate shall,

when requisite and needful, be suddenly interposed between the bottom of the boiler and the fire or burning fuel, and shall immediately suspend or prevent the effect of the heat upon the contents of the said boiler, and in like manner, by a contrary or different motion, shall at pleasure be withdrawn, or restored to the former or original position or situation thereof; and shall again immediately allow the fire or burning fuel to exert its action against the bottom of the said boiler and upon the contents thereof as before. And I do further declare that the chief advantages of that part of my said invention which consists in the use of the said improvements in furnaces are described as follows; namely, that whereas, notwithstanding the care and attention which may be bestowed in separating the charcoal, by skimming and filtering, as hereinbefore described, a minute proportion of charcoal, in extremely fine particles, will nevertheless become perceptible during the subsequent evaporation of the clarified syrup which will rise to the surface; now as soon as the whole thereof shall be observed to have arisen, I do check the action of my fire by means of the doors or registers, and of the plate before mentioned; and when the syrup shall have become tranquil, and remained so for a few minutes, I do skim off the said charcoal and every other impurity which may have escaped the filter. And further, that whereas by the draining of the sugars, or in the subsequent refining or bleaching, by claying or otherwise, the syrups which flow out must unavoidably remain in the pots for a considerable time, and a certain degree of fermentation or spontaneous change is found to take place during such interval of time, by means of which a white scum of considerable acidity and offensive smell is produced, which cannot, in the ordinary process of evaporation, be sufficiently or effectually separated; now in my said method, as soon as the first boiling up hath taken place, by means of which the said white acid and offensive matter arises to the surface, I do check my fire and the effect thereof as aforesaid, and do suffer the lump to become and remain tranquil for a minute or two, and I do then skim off all the said white and offensive matter, and such other

impurities (if any) as may appear upon the surface of the syrup; and by this means the syrup is prevented from showing any further signs of effervescence, and the grain of the sugar is rendered more beautiful and the sugar finer, and a much more clear, delicate and agreeable flavor than when refined in the common way; and further, that in the ordinary process of evaporating syrups, it has been found expedient and necessary, whenever the fluid rises suddenly so as to endanger the boiling over, to throw in a piece of butter or grease, which has the effect of checking the boiling, but is injurious to crystallization, and also to the flavor and smell of the sugars; now I do, in my said method, entirely avoid the said inconvenience, and do check the boiling, whenever the same may be required, by means of the doors and registers, and more especially of the plate, as hereinbefore described and directed; and, thirdly, with regard to the refining of sugars in lumps, pieces or loaves, instead of the old method of claying, I do effect and perform the same by gradual percolation of my purified syrup cold through the said sugars, in order to clear out the colored syrup or molasses which occupies the interstices between the crystals of the sugar at the first formation thereof; and I do declare that it is of importance that the syrup made use of for the percolation should be of a proper strength or specific gravity, because a syrup of too great strength or specific gravity would not flow with the best advantage, and a syrup of too little strength or specific gravity would dissolve a part of the crystals themselves, and thereby make cavities in the mass of sugar through which the syrup would principally run, and the sugar not only be rendered of an uncertain and irregular texture or appearance, but would likewise be impeded or prevented from obtaining the required degree of purification. And further, I do declare that for cassonades and other white sugars, the cold syrup for percolation must have a strength of thirty-eight degrees, and that, if the sugar be close-grained, the syrup must be of the strength from thirty-seven degrees and a quarter to thirty-seven degrees and a half; but that if the sugar be light and open-grained, the

syrup must be used at thirty-eight degrees. And further, that when the loaves of sugar are to be refined or bleached, the upper part of the loaf, commonly called the fountain, must be taken off as usual with a knife, or other fit instrument, until the sugar appears solid and firm, and the same then turned upside down in and along with its pot or mould ; and after an hour, or more or less, according to the quality of the sugar, I strike or tap the same upon the block, in order to separate the loaf from its mould, and do close the aperture which is at the point of the mould with a piece or plug of rag ; and thereafter I do replace the loaf (still in its mould) with the point downward, as fairly upright as possible, and do suffer the syrup (naturally included therein) by that means to return to the point of the loaf, and do afterward pour on a due quantity of my white purified syrup, which I take care to have more or less in quantity, and even purity, according to the nature of the sugar-loaf to be refined ; that is to say, if the sugar be already very fine, I add only a small quantity of the whitest syrup, but if the sugar be yellower, I use a larger quantity of syrup, which may be of an inferior quality, as hereinafter mentioned ; and at the expiration of from twenty-four to forty-eight hours, accordingly as the sugar may have been more or less fine at first, I do take out the plug of rag, and suffer the yellow or dark-colored syrup to flow out at the same time that it becomes replaced by the white syrup, and the sugar is thereby rendered either perfectly fine or greatly improved, according to the description of sugar and the process made use of. And I do further declare that it is practicable, by my said method, to bleach and refine all sugars without being obliged to turn or agitate them, or to put in a plug as before described ; but that in this case there would be danger of spots and irregularity of color in such sugar-loaves near to the point as might originally have been of a dark color ; and also that the flowing out of the first syrup might render the loaf porous and allow the white syrup to pass readily through the larger passages or pores instead of performing its office of driving the yellow syrup before it, and completely refining the sugar as was intended

to be done. And further, that I do use and apply the syrup, which shall or may have been used in the purifying, by percolation of white sugars of good quality, to purify in like manner the lumps or masses of sugar which shall or may have been obtained in the first instance from my syrups, which have been purified by means of prepared charcoal in the boiler as before directed and set forth. And further, that I do use and apply the syrups, which shall or may have been used in the purifying by percolation of the sugars royal, or sugars of the finest quality, to purify in like manner very good common sugars ; and that the syrups obtained from this last-mentioned percolation may, in like manner, be used in purifying the said lumps, so that the same syrup may be employed in three operations, and afterward, without further preparation, may be boiled to be manufactured into lumps. And, lastly, that in the act or operation of filtering of the syrups hereinbefore mentioned and directed to be performed, I do find it very convenient to support the filter or filtering cloth upon or within a basket expressly made of a convenient size and figure for that purpose, and that I do place the filter so supported upon certain bars or supports fixed across a suitable trough or vessel, having a pipe and cock from the lower part thereof, for the purpose and intention of keeping the first runnings (which are less clear) from the subsequent clear runnings, and of returning the said first runnings again to the filter, as is usual to be done in operations of this or the like nature."

The specification of the Martineau patent :

"The vegetable substance to which we have particularly applied this invention is sugar, or sugar more or less dissolved in water, for the purpose of clarifying or refining it, though the said invention will apply to other vegetable substances, and in particular to such vegetable acids as are usually prepared or manufactured in a crystallized state. And we declare that if our invention, so far as relates to animal charcoal, be applied to these acids or other vegetable substances, the process to be employed should be the same as is hereafter described, excepting only that as blood may

be advantageously used in refining sugar, it is not necessary for refining other substances from which the articles we employ may be separated by filtering in common and well-known methods. And we hereby declare that the nature of our said invention, and the manner in which the same is to be performed, are particularly described and ascertained as follows: The articles we employ for purifying and clarifying sugar are, 1. Animal charcoal; that is to say, animal substances, properly burnt or charred or calcined, whatever denomination the said charcoal may have obtained, as ivory black, bone, ash, etc., and afterward reduced into smaller pieces or powder. 2. Bituminous earths, commonly called coals, either in the state in which they are mined, or articles of their products after fusion, and reduced as aforementioned. 3. Certain argillaceous earths, known by the name of ochres. 4. The vegetable charcoal, usually called lamp-black. We, however, generally prefer the use of the first-mentioned articles in the process of refining and clarifying sugar, which we find renders the sugar so clarified much whiter than by the heretofore common method of clarifying. Now, although the manner of applying the above-mentioned substances in the refining of sugar may be greatly varied, yet the following method we prefer. We do charge or fill our boilers or pans with sugar and water, or lime-water, as in the common and well-known methods of refining sugar, only sometimes preferring to add a little more water or lime-water than in the common mode of refining, as it generally more easily and effectually separates the animal charcoal, or other substances, from the liquid sugar. And we also add to the above sugar and water in the boiler a quantity of the substances before mentioned, in any quantity, according to the quality of the sugar to be refined or clarified, though we generally prefer two to five pounds of charcoal or earths before mentioned to and for every hundred-weight of sugar to be clarified or refined. And, farther, we do pour into the boiler the usual finings of eggs, blood, or other albuminous matter, in rather larger quantities than in the usual mode of refining, in order in some degree to coagulate and combine the animal charcoal, or other substances, with the dirt

contained in the sugar. We do now well stir up and agitate the liquor in the boiler, in order that the animal charcoal or other substances may have the greater effect in blanching the liquor. And after the coagulated albumen has completely risen in the form of scum by the application of heat, in the usual way, we either skim it off, as in the common process, or we do pour the whole of the liquid sugar and scum into and upon the usual or any other known filter where this clarified liquor is completely separated from the albuminous matter, as well as from the animal charcoal, or other substances employed, taking care to return back into the filter the first runnings of the said liquor, if not quite separated from the above substance used. And, farther, we do proceed in the well-known and usual manner to evaporate, granulate and refine the said liquid sugar so clarified. And, farther, we do boil over and filter our scum in the usual manner. And we do farther declare that the sugar so clarified and refined is preferable to sugar refined in the heretofore common mode, inasmuch as it is purer and whiter. And we farther declare that the syrups obtained by this process have not that tendency to ferment which the syrups have which are produced in the heretofore usual method."

The bill set forth, as the ground of injunction, that the defendant, George, pretending to treat with the present defendants about the purchase of a license from them for practising their mode of refining sugar, had watched the process in their manufacturing houses, and afterward, without license, put it in practice for his own advantage, and to the manifest injury of their patent rights.

Bell, who opened the case for the defendants, contended that the patents themselves were not good, the process of refining by means of charcoal being no new invention, but had been particularly described in the "Repertory of Arts,"¹

¹ The following is the publication referred to :

"On the decoloration of vinegar, and a new process for depriving this acid and other vegetable liquids of their color, by means of animal charcoal. By M. FIGUIER. From the '*Annales de Chimie*.'"

"In the course of my experiments for destroying the color of vegetable

published in February, 1813, long anterior to the date of the second patent, and had been practised by himself three

liquids by means of charcoal, I have discovered that animal charcoal possesses the property of decoloring several of them in a greater degree than the vegetable charcoal. I shall not relate the numerous experiments I have made to this end; I shall only describe the process that must be followed, in order to effect the entire decoloration of the liquids that have occupied my attention; thus, in order to take away the color of vinegar, a litre of the red sort cold is mixed in a glass vessel with forty-five grammes of bone charcoal, obtained in the manner hereafter described; this mixture is shaken from time to time, and at the end of twenty-four hours it is perceptible that the vinegar begins to whiten; in two or three days its color is entirely gone, and when filtered through paper it passes perfectly transparent, and as colorless as water, without losing any of its taste, smell, or acidity. When the decoloration is to be effected in the large way, the animal charcoal is thrown into a cask containing vinegar, and care is taken to stir the vinegar in order to renew the points of contact. It is not necessary to employ so great a quantity in proportion for the large way as for the small; one half is sufficient. The color in such case disappears less instantaneously, but the operation is equally certain; and whatever length of time the vinegar is left in contact with the charcoal, it never contracts any smell or taste that is foreign to it. I have kept similar mixtures by me for several months, and the acid has not suffered the least alteration. If the vinegar is intended to retain a little of the color, the proportion of charcoal may be reduced.

"The charcoal is prepared in the following manner: I take the most compact part of ox and sheep bones, and fill a crucible with them; I carefully lute the cover, leaving only a small opening at the top; the crucible thus prepared I place in a forge furnace, and heat it gradually until it is red; when the flame that is produced by the combustion of the oily and gelatinous parts of the bones has ceased, I diminish the opening in the lid, and suddenly increase the fire; it then evolves carburetted hydrogen gas and oxycarburetted; when it is cool, I unlute the crucible, and reduce the charcoal on porphyry to a very fine powder. I have observed that the decoloring action of animal charcoal, thus obtained, is powerful in proportion to the care that is taken in its preparation and in its pulverization.

"Ivory black, as well as bone black, has the property of destroying the color of vinegar, wine and the residuum of ether; both lose this property after being employed for this purpose; but it may be revived in them by heating them strongly in a closed vessel. It is true that the decoloring action is less powerful, but it is still strong enough to effect the decoloration completely, when the mixture is left in contact for several days or more.

"All the experiments here related have been repeated with wood charcoal, previously washed, calcined and carefully pulverized. The decoloration of the above-mentioned liquids by this charcoal was almost insensible; whence it results that animal charcoal possesses the decoloring property in an infinitely greater degree than the vegetable charcoal, an important fact which has not hitherto been observed, and which may be employed in numerous and useful applications to the chemical arts."

months before the earlier of the patents, as had been testified by the affidavits of his two sons and four laborers.

Romilly, for the plaintiff. As to the defence set up by Mr. George, that he collected his knowledge from the "Repertory of Arts," it was very strange that he should have suffered two years to elapse before he made any use of the process. But by his own account, the experiments which he had made with charcoal in the refinement of sugar were abortive until he had improved his practice, not by the "Repertory," but by means of what he was permitted to see in the manufactories of the plaintiffs, while he was pretending to negotiate with them for a license.

Hart, on the same side, observed that Mr. George did not deny that he had been infringing on the patents, contending only that the same materials had been used for the same purpose before; but as to his having acquired his knowledge from the source suggested, the plea was absurd and inconsistent with his own testimony. In November, 1814, it was plain, by his correspondence with Mr. Hudson, that he had no such knowledge. In consequence of what that gentleman had imparted to him, he says, in a letter to Mr. Hudson, that he had tried the experiment of refining by charcoal, but failed. He then observes that the failure might be owing to his using lime-water instead of pure water. It was strange that he could be thus ignorant of a process with which he professes himself to have been before familiar. Mr. Hudson in his reply omitted any notice of what had been said, but warned Mr. George not to infringe on the patents. As to what had been said on the subject of charcoal in the "Repertory," it referred not to the clarification of sugar, but to the qualifying of acids; and with respect to the originality of the invention, it was not necessary that every part of a new and useful invention should be such as had never existed before. A knife was necessary to shear cloth; but a knife might be contrived of a new form and construction, which would do the work much better than a common knife, and might on that account entitle the contriver to the rights of a patentee. It was not

the principle, but the application of the principle, that must be new.

Leach, on the same side, referred to a former case, in which his lordship had laid it down as a rule that the novelty which was required in the title to a patent lay in the new and useful application of a principle, whether the principle itself was then first advanced or not. It was plain that in May, when Mr. George was negotiating about a license, he was quite ignorant of the process and principle, and so expressed himself to Mr. Wackerback and others, to whom he mentioned his surprise and astonishment at the effects which they allowed him to witness. His taking advantage of what he had been permitted to see, under the pretext of taking up a license, was a gross fraud.

Lord Chancellor ELDON had been of opinion that patentees were rather hardly dealt by, though he knew there were some sound opinions at variance with his own in that respect. It was impossible for him to forget the arguments which on a former occasion had been used by Mr. Leach and Mr. Hart—arguments not exactly consonant to those they had used to-day. He should, however, dismiss that impression from his mind, and apply his judgment, as well as he was able, to the plain facts delivered to the court, and by no means urge the rights of patentees beyond their lawful limits. Patents might be right, or they might be partly right and partly wrong. They might give too extensive an authority to the holders. They might empower their possessors to interfere with the fair and proper use of materials belonging to their trade, and to say, “We are armed with the law against you, and you must not use those materials unless you can show us that our patents are good for nothing.” Great inconvenience to His Majesty’s subjects must arise from the imperfect nature or doubtful interpretation of the rights of patentees. A new method of improving a machine might be devised, and a patent obtained for it; but that would be no obstruction to the use of the old one. The main and the first question was, whether the patents were good or not; and the best mode of determining that

would be to proceed by law, for it was only in a few special cases that that court could properly enter on such subjects. The patents must be protected until they were found to be bad. The affidavit of the defendant states that he had been in the practice of proceeding by the process named in the patent three months before the date of the patent. He was by no means prepared or inclined to justify the mode by which the defendant appeared to have acquired information while he seemed to be looking for a license from the plaintiff; yet, having got his knowledge even by such exceptional means, it would be difficult to prevent him from using it. The question was simply whether the patents were good or not, and that was plainly a question of law. If they should be determined good, damages might be recovered to the extent of their violation, not only by the patentees, but by the persons who had obtained licenses from them. What he should recommend would be to take the question into a court of law, and, in the mean time, he would order that an account be kept by the plaintiff of the number of pans which he employed, and of the quantity of sugar produced by the new mode of refinement.

The validity of the patents was upheld.

BROWN *v.* MOORE.

Chancery, Nov. 22, 1815.

Claim too Broad. Inspection of Defendants' Machine, etc., allowable to Plaintiff.

A patent giving, in general terms, an exclusive privilege of making lace by machinery, it must be for some particular machine or method.

A bill to obtain an injunction against infringement need not set out the specification of the patent in terms. To allege that a specification exists is enough, the enrolment or record may be inspected.

Plaintiff seeking injunction against infringement allowed an inspection of the construction and working of defendants' machinery.

Application to dissolve injunction.

The plaintiff had obtained an injunction to restrain the defendants from using and putting in practice the invention of the plaintiff for making lace.

Hart, after answer, stated for the defendants that the plaintiff was a manufacturer of lace, and the defendants, for whom he appeared, were engaged in the same line of business. He grounded his application to set aside the injunction on two points: 1. The injunction ought not to have been granted originally. 2. The defendants denied the title of the plaintiff to the new invention. The injunction restrained the defendants from using the invention, or counterfeiting the same, or selling lace manufactured by a machine similar to that of the plaintiff. The case made by the plaintiff, he said, was this: In the month of April, 1811, the plaintiff invented a machine for manufacturing lace or net, similar to Buckinghamshire lace made by bobbins on pillows by hand, and afterward obtained His Majesty's letters patent for the sole and exclusive use of such machinery, on the condition that the invention was new in this country. The plaintiff must, therefore, be considered by his bill as making lace by a machine which in itself was new, but he had not stated to the court that he had entered a specification of his machinery. The bill was totally silent on this subject, and the court, he conceived, had been surprised in granting the injunction. The bill then stated that the defendants at Nottingham had been violating the patent by making lace by machinery similar to or the same as that of the plaintiff; but if it should appear to the court, by incontestable evidence, that the plaintiff's machinery was not a new invention, he had not stated sufficient ground for granting the injunction against the defendants. In his affidavit the plaintiff stated, not that he had invented particular machinery different from that which had been used before for making lace, but that he was the inventor of a machine for manufacturing lace similar to Buckinghamshire lace or French net; but the injunction ought not to have been granted on the affidavit of the party, but on the allegations of the bill supported by affidavit. The answer of the defendants denied the plaintiff's title from beginning to

end ; it insisted that he was not the first inventor of this machine for making lace, as the art of manufacturing lace by such machine had been known long before 1811, and had been used by other manufacturers, and the right to use it was common to all persons ; consequently, the patent was void in law. A patent had been granted for this purpose in 1809 to Mr. Heathcote, and the plaintiff was still in possession of the model of a machine which had been used long before he obtained his patent. The defendants admitted that they and several other persons had been making lace by a machine, but the defendants' machine was constructed in part similar to those of other manufacturers, while the other part was kept secret by them for the benefits of their trade. They denied that they had infringed the plaintiff's patent, and contended that the plaintiff was incapable of making lace according to his specification as enrolled. The plaintiff, however, had been extremely negligent in not applying sooner to the court. In June last he had objected to the defendants making lace by his machine, but the defendants insisted that they had a right to manufacture it. The plaintiff then stated that, as the lace trade was in an indifferent state, he would defer his attacks on the defendants, and it was only in August that he applied *ex parte* for the injunction.

Romilly. The defendants' answer was most evasive from beginning to end, and the plaintiff was clearly entitled to maintain the injunction. The defendants' misconception of the bill was altogether voluntary. A man could not have a patent for making lace by machinery ; it must be by a particular machine, and such was the patent which the plaintiff had obtained. The defendants had endeavored to impose on the court by their answer ; the plaintiff had only stated that he had invented a machine, and not that he was the inventor of the art of making lace by machinery. It was not necessary that the bill should state that he had given in a specification, but the plaintiff had described the component parts of his machine in the specification enrolled. The affidavit stated the peculiarities of his machinery : the warp threads were made to traverse across the work diag-

onally, whereas in other machines they went perpendicularly. It was of no importance whether the plaintiff was manufacturing lace according to his specification or not, he might have made subsequent improvements, and no other person had a right to use his patent though he did not use it. This was perfectly clear in the law of patents. If the plaintiff had been so negligent as the gentleman on the other side had stated, the court would not have granted the injunction, but left him to an action at law. The defendants admitted that they had manufactured lace by a machine, and that the plaintiff knew the fact, but they did not say that the plaintiff was aware of their using the same machinery as his. The plaintiff did not know that the defendants were violating his patent right, and the defendants had sheltered themselves under an evasion which they would not have adopted if they had not been conscious that they were infringing the patent.

Lord Chancellor ELDON. The injunction was granted, as stated, late in the year; it was neither the fault of the counsel who applied for it nor of the court who granted it. With respect to the merits of this application, I have read the bill very carefully, and will pay the same attention to the answer which has been matter of discussion at the bar. When the application was made for the injunction, there was a very detailed statement of the bill given. The plaintiff stated that he was entitled to a patent, and it never occurred to me that the plaintiff intended to say that his patent was granted for machinery generally. No such patent could be granted; but if the terms of it had been such, instead of being for a particular machine, I should at once have said that he could not exclude the ingenuity of mankind for fourteen years from the art of making lace by machinery. It has been said that the bill mentioned nothing about the specification; it was unnecessary, however, to set down the specification *in hæc verba*, since it was enrolled on the records of the court itself. It was enough to say that there existed a specification; and if there was a specification it could be at once inspected. The bill, how-

ever, loose as it is, has put that point out of question. At this time of day we are supposed to be much improved in our proceedings; but Lord Kenyon would have been very angry if such a bill had come before him. The answer must be carefully perused, to see whether the defendants meant to quarrel with the notion of machinery in general, or intended to admit that it was a patent for a new machine, or new component parts added to those which the public knew before.

He afterward ordered the injunction to be continued, and an action at law forthwith to be brought and tried; and that the plaintiff in the suit should, by his witnesses, have an opportunity of seeing the construction and mode of working of the defendants' machinery.

BOVILL v. MOORE.

Chancery, Dec., 1815.

Power of Equity. Inspection.

Equity has power to make its order directing an action to be brought effective by granting an order that plaintiff's witnesses shall have an opportunity of inspecting defendant's premises and machinery.

Lord Chancellor ELDON. There is no use of this court directing an action to be brought if it does not possess the power to have the action properly tried. The plaintiff has a patent for a machine used in making bobbin lace. The defendant is a manufacturer of that article, and, as the plaintiff alleges, he is making it with a machine constructed upon the principle of the machine protected by the plaintiff's patent. Now, the manufactory of the defendant is carried on in secret. The machine which the defendant uses to make bobbin lace, and which the plaintiff alleges to be a piracy of his invention, is in the defendant's own possession, and no one can have access to it without his permission. The evidence of the piracy at present is the bobbin lace made by the defendant. The witnesses say that this

Fig. 2.

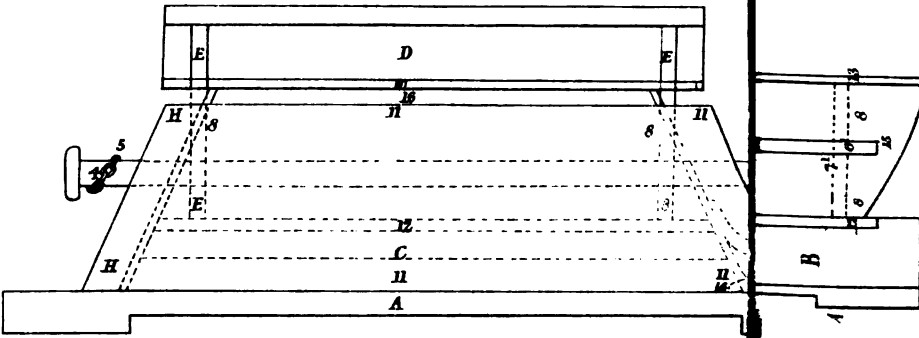
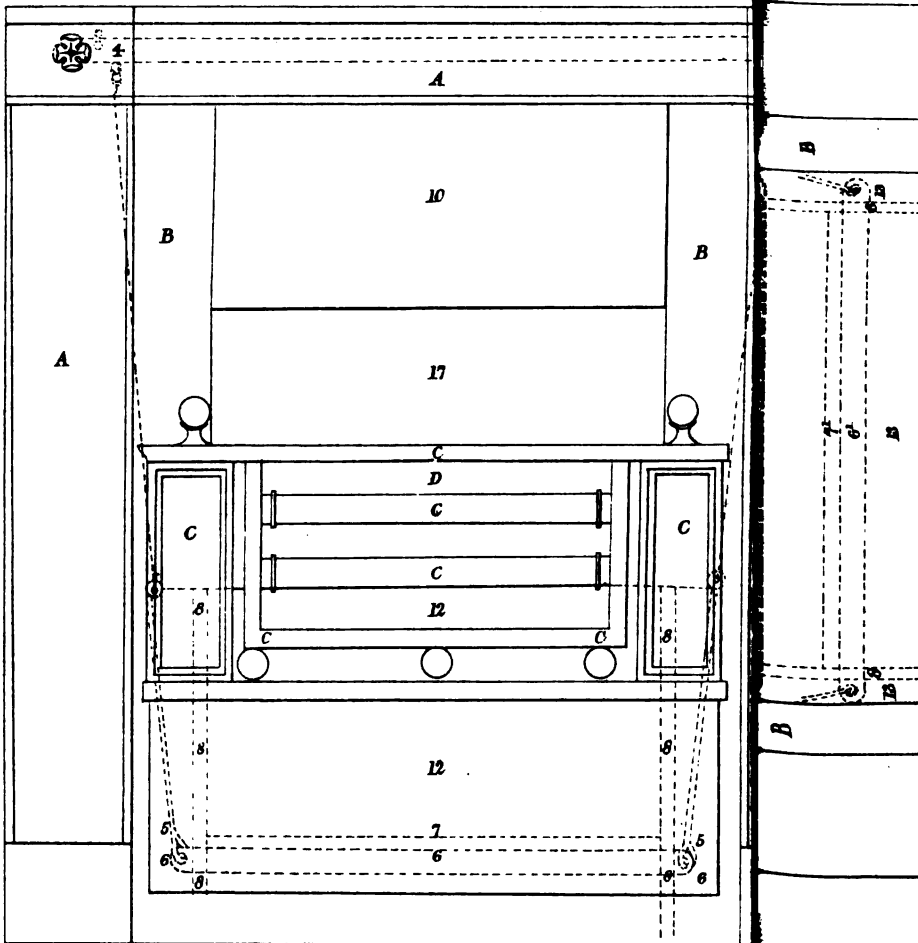


Fig. 1.



Cutler's Improvements in Fire-places, Stoves, &c.

Firstly, with regard to the nature of the same, it doth consist in the offering fuel for combustion in a more beneficial and oconomical manner, which is effected by means of my said improvements applicable to fire-places, stoves, &c.; and, secondly, with regard to the method of performing it, is clearly set forth herein-after, and by the Drawings or Designs hereunto annexed, and figured 1, 2, 3, 4, of and in which the same parts are universally distinguished by the same numerical characters or letters of the alphabet; and Fig. 1 represents a front view of a stove similar in appearance to those well known by the name of register stoves, with my said improvements herein-after described. Fig. 2 represents a top view of the same; Fig. 3, a view of the nature of a section; and Fig. 4, a back view of the same, and the parts marked with A, B, C, D, and E, are parts similar to those in common use, and constitute no part of my said improvements; and in reference to the separate parts, 1 represents the end of the axis of the pinion 2 passing through a circular hole in the plate A, with a square hole in the said axis (which may be concealed by fastening on by means of two small holes on each side an ornament like that seen in the similar situation on the other side) for receiving a square pin or keying piece affixed to a winch or other lever 18, and capable of being turned thereby. 3 is a contrate wheel, taking in and receiving motion from the pinion 2, and fixed on the axis 4, 4, to which are fastened the chains 5, 5, 5, 5, capable of being wound thereon by the rotation thereof, and to the other end of the said chains 5, 5, 5, 5, is affixed the bar 6, capable of passing freely up and down in certain grooves in the side plates 8, 8, as seen in the section, Fig. 3, where one of the said grooves are represented at 15, 15; and 7 is a plate of iron placed and fastened upon the bar 6, and of such dimensions, as with its surface horizontal to pass freely up and down the chamber formed by the plate 8, 8, and 12, 13, with and upon the said bar 6, and acts in the situation of a moveable bottom to the said chamber. 9 is a pin leading through the plate B, and joined to 14, 14, a pall taking in the pinion 2, and keeping the same motionless whilst locked therein. 10 is a plate of iron formed of such dimensions as to leave between the said plate and the back D the open space 17, having communication with a flue or chimney, and of such capacity as to cause across the top of and through the fire or part ignited, hereafter mentioned, a draft or current of air by experiment or otherwise found to be necessary to support the combustion required. 11, 11, 11, 11, is a plate of iron in a similar situation to the cover or flap of a register stove fastened or by its weight remaining stationary on the bevel cheeks B, B, and leaving the small opening 16, likewise having communication with the flue or chimney, and allowing a small current of air to pass through the same, and I do lower my said moveable bottom 7 to the situation seen at 7¹, Fig^s 3 and 4, and do fill my said chamber formed by the

same and the plates 8, 8, 12, 13, with coal or other suitable fuel, and likewise my stove or fire-place above the same, and do light the said coal or other suitable fuel at the top thereof, the same being kept in ignition by the draft or current of air passing through the space 17, and the draft or current of air passing through the space 16 serving to carry off any dust, and thereby keep the parts above in better preservation, and as the said fire or part ignited consumes the said coal or other suitable fuel, I do press upon the pin 9, and lift the pall 14, 14, and by means of the winch or other lever 18 taking in the axis of the pinion 2, turn the said pinion, and thereby, by the before-described connection, cause the said bar 6 and the plate thereon 7 to move and raise the said coal or other suitable fuel in the said chamber, and thereby supply the fire or part ignited, or I do, should the same have been raised, lower it by the same means into the said chamber, where the part ignited becomes extinguished for want of free communication with the atmosphere. And moreover know ye, that the said means of producing a draught or current of air at 17 and 16 do not constitute part of my said Invention, but are only requisites in the performance thereof, the same having been well known long since; but that the amount of my said Invention doth consist in the constructing of fire-places and stoves in such manner as that the fuel necessary to support or assist the combustion required shall be given or afforded to the part or place in combustion at the lower part of or from beneath the same, either directly, perpendicular, or in an oblique direction, and in the lowering by the same means the said fire or part ignited into a chamber, so that the same shall become extinguished, and that my said Invention of certain improvements is applicable to fire-places, stoves, &c., by which I mean any situation whatsoever where fuel is to be successively applied or offered for the means of supporting combustion for the purpose of heat, and as to the form, dimensions, or construction of and in the same, they may be varied and adapted to the situation or other circumstances governing them, and which variations and adaptations any competent workman in works of this and the like nature can devise and execute.

lace must have been manufactured by the plaintiff's machine, or by a machine similar to it in principle. This is obviously in a great measure conjecture. No court can be content with evidence of this description. There must be an order that plaintiff's witnesses shall be permitted, before the trial of the action, to inspect the defendant's machine, and to see it work.

REX v. CUTLER.

King's Bench, N. P., Trin. T., 1816.

Specification. What Novelty is Necessary.

When the claim in the specification is for a principle, if this principle is not novel the patent cannot be supported merely because the application of it described in the patent is new.

Scire facias to repeal a patent.

Letters patent were granted to the defendant, dated July 1, 1815, numbered 3873, for an improvement in grates. The material question arising on the pleadings in this case was whether the invention was novel.

See specification and drawings.

The defendant in his specification summed up the amount of his claim thus: My invention consists in this, that the fuel necessary for supplying the fire shall be introduced at the lower part of the grate, in a perpendicular or in an oblique direction. As to the manner of performing it, it is set forth in the annexed descriptions and drawings.

In order to disprove the novelty of the plaintiff's invention, evidence was given that Mr. Marriott, a manufacturer of grates and stoves, had in the year 1812 made a model, which was produced, of a grate and its appendages for cooking. The grate, which was of considerable length, was furnished with a door. When this door was open, the grate in no respect differed from an ordinary one, but when the door was shut, no part of the grate was visible except a few

of the highest bars, and the whole of the grate having been filled with coals, and the coals within the bars above the door having been lighted, the coals in the lower part of the grate were carried up, for the purpose of supplying the consumption above, by means of a rack and pinion, at the discretion of the cook. The principle of this grate, it was contended, was precisely the same with that for which the patent was claimed, the lower part of the grate, when the door was shut, being in effect a closed chamber, to which the air had no access, and the coals being gradually wound up from this chamber so as to afford a supply to the fire above. Marriott stated that he had also applied the same principle to a common grate long before the date of the patent. Another manufacturer, of the name of Coombe, exhibited a grate for cooking nearly on the same construction. The grate was supplied with two doors, one above the other; when both were shut, and also the ventilator, and the higher door thrown open, the closed part of the grate supplied the part of a chamber, from which the coals were wound up by a rack and pinion, in order to supply the fire above as it was wanted for culinary purposes.

It was contended for the defendant that his invention went beyond that exhibited in these grates; in the latter there was no fresh introduction of fuel into the grate, so as to give a perpetual supply; there was nothing more than a means of contracting or compressing coals already within the grate, which could not be done without gradually diminishing the size of the grate itself. It was also contended that there were some minor advantages which the patent grate possessed over those which had been exhibited in evidence.

LORD ELLENBOROUGH was of opinion that the principle on which the two grates were constructed was identical with that described in the terms of the specification, which was for a mode of supplying fuel from below, and there was nothing predicated in the specification of raising the fuel from the grate; it was merely for elevating a supply of fuel from below; and that the defendant had confined

himself, by thus summing up the extent of his invention, to the benefit of this principle.

Verdict for the Crown.

MACFARLANE v. PRICE.

King's Bench, N. P., Feb. 20, 1816.

Description of Improvement.

Specification of improvements in making umbrellas,—*Held* bad, as embracing former construction as well as improvements.

Trial of an action for infringement.

The patent was described generally as a patent for certain improvements in the making of umbrellas and parasols. The specification professed to set out the improvements as specified in certain descriptions and drawings annexed.

Topping, for the defendant, objected that the specification made no distinction between those things which were old and those which were new, therefore everything in the specification must be taken to be claimed as the patented invention ; and it would be evident that many things shown and described were old, the patent was therefore void.

The *Attorney-General* contended, for the plaintiff, that the specification was sufficient, since one of the annexed drawings contained a representation of the particular invention which had been pirated, and was confined to the exhibition of the insertion of the knobbed stretchers in the whalebone sockets, from which an artist would be able to construct an umbrella on the improved plan.

Lord ELLENBOROUGH, C. J. The patentee in his specification ought to inform the person who consults it what is new and what is old. (See *Manton v. Manton*, p. 189.) He should say, My improvement consists in this, describing it by words if he can, or if not, by reference to figures. But here the improvement is neither described by words

nor figures, and it would not be in the wit of man, unless he were previously acquainted with the construction of the instrument, to say what was new and what was old. The specification states that the improved construction "was made in manner following." This is not true, since the description comprises that which is old, as well as that which is new. Then it is said that the patentee may put in aid the figures, but how can it be collected from the whole of these in what the improvement consists? A person ought to be warned by the specification against the use of the particular invention; but it would exceed the wit of man to discover from what he is warned in a case like this.

Nonsuit.

COCHRANE v. SMETHURST.

King's Bench, N. P., Feb. 22, 1816.

Breadth of Specification. Description of Improvement.

Patent for an improved method of lighting towns. *Held* too general to be supported by an improvement of an old street-lamp, by a new combination of parts known before.

Issue out of Chancery.

The patent which it was sought to establish was granted to the plaintiff, March 3, 53 Geo. III., for "a method or methods of more completely lighting cities, towns and villages."

Garrow, Attorney-General, for the plaintiff, explained the principle of construction of Lord Cochrane's lamps, stating that there must be a current of pure air, but a current of air was no part of the invention. The placing of flame between two currents of air was not new, it was the principle of Argand's lamp; but if Argand's lamp was put into a case without a regular supply of atmospheric air, it

would not answer ; the air, being burnt and burnt again, would become exhausted, and incapable of any longer feeding the flame. There must be a succession of pure air to feed the flame, which should not mix with the contaminated air. This was accomplished by Lord Cochrane's invention, by taking care that the foul air should not return to burn over and over again by means of an air-tube through the external part of the lamp, which conducts the air to the flame. Argand's chimney must be brought down close to the flame and surround it. In this invention it was different, the heated air ascends out of the glass vase, with no possibility of returning to it ; it goes out like smoke from a chimney. The lighting the burner without introducing the torch into the lamp would not of itself have been thought worth a patent ; but we are to be told this is not new, but has been made before. [The counsel then reviewed the testimony on which he relied as proving originality of invention.] To support a patent in a court of law, it is necessary, 1, that the invention should be new ; 2, the plaintiff must be the inventor ; and 3, the invention must be so specified that the public may have the use of it after the privilege of the patent has expired,—in all which points it will be proved that this patent can be supported. It only remains that something should be said upon the subject of reflectors. We do not claim any merit in the return of light, but in the exclusion of the foul air from returning by the non-absorbing cover, which forms what is called in the specification the line of exclusion.

On behalf of the defendant, the following objections were made to the patent and specification :

1. That the patent was too large and indefinite in its terms, being for an improved mode of lighting without taking any notice of the invention being only an improvement of a lamp.

2. That the specification was larger in its terms than the patent, the latter being for an improved mode of lighting cities, towns and villages, and the specification claiming the benefit of its application to lighting churches, theatres and other places.

3. That the patentee had not sufficiently defined what he meant by the line of exclusion.

4. That it had not been specified that the outward air should be excluded from the case, except as to the portion which was conveyed through the admission pipe, in order to feed the lamp.

5. That upon the evidence it appeared that the improvement rested entirely upon the combination of parts known before ; but in the specification the plaintiff claimed the benefit of each part separately, viz., the admission pipe, the eduction pipe, the line of exclusion, and the mode of raising the burner, without stating a claim for the whole together as a new combination. [LE BLANC, J. Under the general terms of the patent, must not it be taken with reference to the specification ? and if the specification is too large, is not the patent so too ? Bringing in a current of pure atmospheric air is not new.] But bringing in the current of atmospheric air and excluding all other air is new.

LE BLANC, J. I am of opinion that the patent cannot be sustained. The plaintiff has obtained his patent, not for an improved street-lamp, but for an improved method of lighting cities, towns and villages ; but from the specification it appears that the invention consists in the improvement of an old street-lamp, by a new combination of parts known before. The patent, therefore, is too general in its terms ; it should have been obtained for an old street-lamp, and not for an improved mode of lighting cities, towns and villages.

Nonsuit.

The parties to this action were previously before the Court of Chancery upon a bill filed by Cochrane against Smethurst charging infringement and praying an injunction, also an account of profits. Upon a motion for an injunction the Lord Chancellor expressed doubts as to the sufficiency of the specification ; and, after taking time to consider, said : " The plaintiff must bring his action, and if those before whom the cause is tried view the specification in the same light that I do, there will be an end of the question ; and if the plaintiff fails, he must pay the costs. I do not think it necessary to say anything further as to the difficulties which occur to me upon the specification lest any observa-

BOVILL v. MOORE.

Common Pleas, N. P., March 1, 1816.

Requisites of Specification. Drawings. Novelty. Extent of Claim. Suppression of Part of Invention. Improvement.

To entitle plaintiff in an action for damages for infringement to recover, he must show that he is entitled under the patent to an exclusive privilege; that the defendant has violated it; and that he, the plaintiff, has conformed to all the conditions upon which the privilege was granted to him.

If the specification exceeds the limits of the actual invention of the patentee, the patent is void.

In an action for damages for infringement the burden is on the plaintiff of proving the utility of the invention.

One test of the sufficiency of a specification is: Will it enable a workman of competent skill to make the machine?

Another test is: Does the specification enable a workman to construct the machine in the manner most advantageous and beneficial known at the time to the patentee?

An omission of matter from a specification may avoid the patent notwithstanding it was not made with fraudulent intent but only inadvertently; otherwise if the matter omitted was a subsequent discovery.

Trial of an action for infringement.

The patent in question was granted to one Brown, dated April 24, 51 Geo. III., and held by plaintiff as assignee, for machines for the manufacture for "bobbin lace," otherwise called "twist net." In Buckinghamshire this species of lace is made by hand, with pillows; the object of the patented machine was to make it more expeditiously and of better quality.

The *Solicitor-General* stated to the jury that, the patent being for a machine, it is not necessary that every constituent part of that machine shall be new. Nay, it may not be necessary that any one of the constituent parts of the machine taken singly and separately by itself should be new. If the combination of the different parts and things

tion of mine should prejudice the trial of the action." And he ordered the defendant to keep an account, until the trial, of the profits made by sale or use of the lamps in question.

that are used be new, and is applied to a purpose to which it was never applied before, that is sufficient. Indeed a combination such as this, producing the effect this does in the manufacture of lace, never was put together for the production of any particular thing. Almost all machines are composed of old parts. The beam, the lever, the roller, and so on, operating on a machine, are all old, and are perfectly well known ; but without this if the combination be new and useful, that will be sufficient, because the machine is composed by the combination of the different parts of it.

There have certainly been machines used in lace-making. There is a certain sort of machine used for point net-lace : there is another sort of machine used for what they call warp net-lace, but those machines are by no means similar, but on the contrary totally dissimilar to the present ; nor are they capable of making the species of lace which is the object of this, which is called the bobbin lace or the French net-lace.

There has been before this a machine invented by another person with the object of making even this sort of lace, but it will be proved to you by the witnesses that the machine of Mr. Brown is not similar to that machine in the combination of its parts and in the productions and the mode of producing the effect which this produces.

The commodity which is produced by this machine is made either in small widths, or it may be made according as the machine is made larger, and the different parts put together, in different breadths extremely wide, according as the machine is extended, and as the different warps are extended along the beam, and different parts of the machine are in operation or not in operation.

The mode by which this is produced is in the nature of weaving, though in fact the thing produced is what may be called a net mesh. The common netting is produced by a knot, this is not produced by a knot but by a twist ; in order to make this mesh, one thread comes round the other, and then, instead of being tied in a knot at the top as it is in netting, it is in a twist ; one is twisted round the other and pressed down, and then by the tension of all the parts

equally, and particularly by the tension of the selvage, the whole is kept together.

The mode of doing that is by twisting or weaving what are called the beam threads and bobbin threads ; the bobbin thread is the warp thread, and the weft is what we have called the beam thread ; the bobbin thread hangs down perpendicularly, the beam thread is put upon a sort of balloon, at the top, and being put perpendicularly, the bobbin thread passes through two of the beam threads, and when it has passed through the machine is so contrived as that it shall twist round it, and then it is through the medium of our machinery repassed, it changes its position and is repassed through the next thread ; the consequence of that would be that one thread twisting round the other, it is then pressed down by the comb to the bottom, and forms a mesh exactly as a mesh would be formed by twisting the thing round the netting needle ; when that operation is performed it passes again, and then in the same way makes another mesh, and as soon as the operation of the first row is performed, then the bobbin comes back again, and then it passes through the threads again, and so ascending higher and higher it makes the different rows of net.

The object to be produced by the machinery of the present plaintiff's is that which has been stated, and it is constructed with that degree of accuracy that the bobbins always keep their places each to the other. In the production of a piece, there must be as many bobbins as there are threads, and if you extend a piece, whatever be the number of bobbins fixed on the jack, suppose any number of those put in a row, they all work and operate together backward and forward, always keeping their places relatively fixed each to the other.

It has been attempted to be said by certain persons that this is not accurately described in the specification ; but a great number of scientific men, mechanics, and lace-makers also, will tell you that they, looking at the specification, and knowing, as every man must have a competent degree of knowledge to make a thing of the same nature, that they, looking at the specification, can with the greatest ease, con-

sidering all its combinations and its parts before they begin to do the thing, make such a machine as Mr. Brown's; they have examined the machine itself; they have examined also the specification, and they will all tell you that any man of common and ordinary skill in machine-making, looking at that specification, and deriving no information from any other thing but that specification, except that knowledge which an ordinary machine-maker must bring to the business, could construct that machine of Mr. Brown's. The defendant may perhaps be able to call witnesses to say, Well, but I could not. That would be no answer to my case. One man may say, I do not understand that specification so well as to be able to make the machine from it, and I think I ought to do; but if another says, From that knowledge a man ought to have before he sets about any machine at all, in the construction of a machine of this sort, any man of competent skill can make it, and will feel no difficulty in making it, that would be sufficient to get rid of any objection of that sort.

With respect to any other objection to be set up as to this machine not being original in the combination of its parts, that will be left to be stated on the other side, for this reason: that I have not been able to see that other machine which this is supposed to be like; my witnesses have, and, as far as I can understand, they are essentially different in the combination of their parts. I am informed that that other machine, which is, I think, Mr. Heathcote's machine, is not capable of performing the same thing, and certainly not in the same way. You will please to observe this: I do not put my case as if this were a mere improvement of Mr. Heathcote's machine; for if a man takes out a patent, and I, using that machine as the substratum of my machine, only invent a part, I should take out my patent only for the improvement I make upon the other; but however a man may have had another machine before, though lace may be produced by it, if my machine, by a different combination of parts, form together one new whole, then I do right in taking out my patent for a machine, for *qua* machine it is new.

To liken this to another case. Take the steam-engine that was used prior to Messrs. Boulton and Watt's time, it was pretty nearly if not quite upon the same principle, except in that part in which the improvement was made by Messrs. Boulton and Watt, and for which they took out their patent. Messrs. Boulton and Watt, leaving the old steam-engine almost standing in the state in which it was, made a most extraordinary and wonderful improvement upon it by introducing instantaneous condensation of the steam, so as to make the piston operate in a way it never did before; that was an improvement upon the steam-engine, and they took out their patent for the method of lessening the consumption of fire and fuel in steam-engines. The steam-engine was the old steam-engine, they did not state this as an improvement, but the patent was for a method of lessening the consumption of fire and fuel in steam-engines. That case is mentioned for the purpose of stating that my claim to this is not for a method of producing some particular effect which the patent of Mr. Heathcote or any other person did not produce, though it produced all but that particular effect; that is not what I claim. I say this is a new machine; it is a new combination of parts, producing a machine essentially different from any that was ever produced before, though the effect of the former and the object of the present are the same, that is, to produce lace upon the same principle as this. The women who work by hand produce lace; the machine they use, in fact, consists of the fingers, the pins, and the pillow. Mine is machinery to produce all that, and you will see in a moment the application of this; it might as well be said, you can have no patent for machinery, because lace is produced by hand. If they can prove that this is an imitation of theirs, that will avail them; but I say it is a new combination of parts, effectually constituting a new machine.

It will be made out to your satisfaction that this machine is new and that it is perfectly well specified. It has been said that the drawings annexed to this specification as pointing out the parts might have been better executed,

more skilfully drawn. Does that drawing, with the references comprised in the written specification, make it intelligible to the machine-maker and the workman who is to construct it and put it together, so that bringing to his aid and assistance that fair and competent skill in the art of mechanism which a man ought to possess upon the subject, he would be enabled to produce a machine from those instructions? Because, if it be sufficient for that purpose—[GIBBS, C. J. Certainly, you need not trouble yourself upon that, there is no doubt of it. A rough plan, drawn by a person who understands the subject with pen and ink, is better than the most beautiful drawing of a man who does not understand it.] I made the observation because I know a great deal has passed in another place upon the subject of these drawings. As far as relates to the explanation of the mode in which this machine operates, I know I have left the statement extremely short; I am afraid to trust myself in the statement, lest I should blunder; but I will call those who can describe it best, namely, the men of skill and knowledge in this sort of subject. I shall call to you some of the first engineers scientifically, and one or two practical men, who have made some of the most extraordinary machinery in this country, and they will tell you that a common and ordinary workman would, from this specification, be able to make the machine, and that the specification is perfectly sufficient for the purpose for which it is designed.

One word about the piracy. This cause has arisen out of a bill in the Court of Chancery: the Lord Chancellor directed an action to be brought to try the question. The machine by which ours is pirated being in the possession of the defendants, it might be difficult, and must be in many cases, to prove how they have pirated ours. The attention of the plaintiff was first drawn to the imitation by the production of the manufactured article itself, because those who are judges of this article could tell almost upon a view that this was made by Mr. Brown's machinery, or something like it. We have had great difficulty in getting at Mr. Moore's machinery, but we have witnesses who

have had an opportunity of seeing and knowing how the defendants did use their machinery, for (for the purpose of better elucidating the case) witnesses have been sent down by order of the Lord Chancellor very recently, and the defendants have been compelled to show their machinery. One of those witnesses, as good and ingenious an engineer as any man in this country, has been down to Nottingham, and seen this machine, and he will tell you that, notwithstanding some of the little invented deviations, which are very small indeed, substantially it is an imitation. If I make out that I am entitled to the patent, you will have no doubt at all with respect to the other point, that the defendants have imitated this machine.

Copley, for the defendant, observed that the object in contest between these parties was of great importance to both of them, and also to the public, because the manufacture carried on by means of these machines, and machinery of a similar description, has become a very valuable article of commerce in this country.

Ingenious as the plaintiff's machine is, it must not be supposed for a moment that that machine, taken together, is his sole invention; because every person who is acquainted with the mystery of this manufacture knows that this machine is a machine of gradual improvement; that the minds of many ingenious men who have been concerned in inquiries of this kind have, for forty or fifty years, been directed to the compilation of instruments of this nature, and though the principal parts of the machine may be referred to individuals, machines for the purpose of producing bobbin net have been in use for many years, and have been in the course of gradual improvement.

You have looked at this machinery, and it certainly does appear, upon the first examination, to be a machine of the most complicated description; but if you get rid of that which is necessary to set in motion the parts of the machine employed in the manufacture of the lace, it becomes a machine of the most simple construction, and a great deal of that to which our evidence is to be directed will apply, not to those parts of the machinery by which the ultimate

machine is set in motion, but to that ultimate machine by which the lace is fabricated.

There is a frame with a number of threads in the first instance placed perpendicularly and parallel to each other ; the lower extremities are fastened to a roller, the upper extremities are wound round small bobbins, called spoles, and by that name they will be distinguished from the other bobbins made of brass, and which answer another purpose ; there are a number of parallel threads wound round spoles at the top, which supply the thread as it is worked off in the manufacture of the lace. The beam is turned round by that which is coiled round it, and the lace is wound up on the roller : that is the position of one set of threads. Now the operation of making the lace is the simplest in the world : all you have to do is to twist two sets of threads together, and after you have done that, to cross one set. There is another set of perpendicular threads which come up in an oblique direction ; they are wound round small bobbins, which bobbins are wheels constructed in so neat a shape and form that they can pass directly through those upright threads ; the moment those threads are passed through the upright threads, they take a small motion to the left ; the distance of that motion is precisely the interval between the upright threads, the consequence of which is that each bobbin, when it has passed through those upright threads and made this movement, is in a situation opposed to the interval next to that through which it before passed ; it then returns through the threads again, and takes another motion to the right, resuming its former situation. By these four movements, the thread which is wound upon the brass bobbin winds once round the upright thread ; it has gone through the one side, and comes back to the other, and resumes its former position ; but that is not enough, it must wind round it one half time more, for which purpose it again returns and goes to the left.

That makes two sides of half a mesh, the meshes consisting of hexagons. In order to form the upper side, the only thing necessary is to cross the upright threads ; the beam threads are crossed by each taking the place of its neighbor,

so that there are two sides twisted, and a third which is crossed. But there is one other operation to form half a mesh ; these twistings are extended from one end of the threads to the other, and it is necessary they should be racked down and held to the bottom of the machinery, and that is done by a motion that makes half a course, and in order to complete the mesh, the same is performed again, so that the movements are extremely simple, and they are common to all lace machinery of the kind, and those movements are effected in precisely the same way and by the machinery described in this specification, and which, from the nature of the terms of the patent, the plaintiff has appropriated exclusively to himself.

Having described the general movements of this machine, I will now direct your attention to the ultimate parts by which this operation is performed. In the first place, at the top of the machine there is a row of dividers, which is an iron bar, with a number of points cast in lead at exactly an equal distance from each other, ranging through the whole of the top of the machine, and through which the threads pass. The object of the dividers is the keeping the beam threads at an equal distance from each other. Above those dividers there are two bars with forks which project, taking the threads out of the dividers, carrying them just out of the points of the dividers, and then moving in contrary directions, they effect their object, and pass back again into the dividers.

Then we come to the twisting of the thread by means of the brass bobbins. Those brass bobbins are wheels with a small groove on the extremity, round which the thread is wound. Those are fixed into small cases called carriages. The extremities of the carriages are fixed into the comb leads, a number of these are arranged upon a bar, and when the first operation has been performed, then this bar comes down and presses the work and holds it fast ; these move till they get between the upright or beam threads, then they are met by similar machinery coming on the other side, and which takes hold of them ; they are then pressed by another bar, and this bar which held them before is here

thrown up ; the consequence is, they are relieved from this side and taken to the opposite side ; that is the movement by which they are carried from the upright threads, and the whole is performed. I am troubling you thus because I shall satisfy you that this is old, that it is in Mr. Heathcote's machinery, and has been long in use in the town of Nottingham. There is another thing which is also very material. Immediately above the roller there is a slit through which the lace passes ; and it is necessary that these bobbins in their movements should describe the arc of a circle, because, if they went in a parallel motion, those threads which are oblique, as they approached the middle, would become loose ; this is one of the motions which prevails in all instruments of this nature.

Having described what the nature of the machinery is by which this is set in motion, I will now tell you what parts of this are old, and I will direct his lordship's attention to the terms of this patent and this specification, and I think I shall satisfy his lordship beyond a doubt that this patent cannot be sustained. The patent is for an invention of "a machine or machines for the manufacture of bobbin lace or twist net, similar to and resembling the Buckingham lace net and French lace net, as made by the hand with bobbins on pillows ;" that is the object of the patent. It is a patent for a machine, and I do not dispute for a moment that a new combination of old machinery may be the subject of a patent, but I will tell you what is necessary in that case—that when the party takes out his patent, he should call it a new description of old machinery or an improvement of former machinery. It has been decided by high authority very lately, the act requiring he should give a specification of his invention, that when he comes to specify to what his patent does, he must in that specification describe what is old and what is new, because, if he takes every part to himself by that specification of the terms of his patent, there is no individual who would be able to take any part of it, and the public have a right to know what he claims and what he does not.

Now, let us look at the language of this specification.

He says, "Now know ye, that in compliance with the said proviso, I, the said John Brown, do hereby describe and ascertain the nature of my said invention, and in what manner the same is to be performed and operated by the plans or drawings, and in the following description thereof (that is to say) my invention consists, as represented by the drawings hereto annexed,"—and then he goes on in his specification to describe all the simple parts of this machine, and all the combinations of this machine. Then I say he has appropriated to himself more than he is entitled to, and that, therefore, this cannot be sustained.

It is said on the other side, every machine must be compounded of old parts, that there must be a lever and an axle, and so on, and that a person must use them to produce his combination; but the plaintiff describes all these as part of that in which his invention consists. Now, in adverting to this evidence, and that which I shall call on the part of the defendant, I shall satisfy you not only that the primary parts are old, but that complete combinations of it are old; that there are parts of this machine without which, if they were taken away, the machine would not work, which parts are in themselves machines and the subject of patents, and my objection is that he has incorporated these without describing them as being old, and as such appropriated them to himself.

The witnesses called have told you the essence of this machine for manufacturing bobbin lace is the construction of the brass bobbins, which have a movement round the thread and wind the thread. I shall prove that to be old, to have been used by Mr. Heathcote, and a variety of other persons in manufactures of this description, and the only point in which the originality of this invention consists is in making the bobbin threads cross, instead of making the beam threads cross. In other respects it is similar to those which have been used in the town of Nottingham for a considerable time past.

But, besides the brass bobbins themselves, the manner in which they are actually fixed in the comb bars is old, the manner in which the comb bar is fixed is old, and that they

should move round the centre is all old. But there is also a material part with respect to the crossing of the threads, which I shall also prove to be old. The threads enter between the dividers, and then are taken out by forks ; they cross in opposite directions. How is that done ? By a very complicated piece of machinery, which we describe as Dawson's wheels, because Dawson obtained a patent for them. What is contained in section 5, which is incorporated into the plaintiff's patent, has existed as attached to warp-frames for a considerable time past, long antecedent to the date of this patent. It consists of an upper wheel, which is driven round in a particular manner, and by a particular contrivance, setting in motion two wheels, which have indentations and projections, which set in motion two bolts which act upon the fork-bars, which fork-bars project forward for the purpose of taking the threads out of the dividers, which fork-bars cross and throw them back upon the dividers. The whole of this, which would be itself the object of a patent, has existed for ten years at least before this patent, so that I am not saying that there are fundamental primary parts, if I may so call them, that are old, but that there are these complete combinations which are old.

It was but a few days ago an action was tried for pirating the patent for an umbrella. On adverting to the specification, it appeared that the plaintiff had described his invention as consisting of so and so, and so and so. The witness was asked what was new, and he described the parts ; but because the specification did not distinguish the new from the old, the plaintiff could not have the benefit even of that which was new, and he was nonsuited. Every gentleman, from his own knowledge and his own recollection, would be competent to say what was new and what was old, but I am entitled the moment this patent expires to go and set up this machine, and I ought to be in a condition, by looking at this, to be able at once to make the machinery, and at once to distinguish that which is new from that which is old. Suppose a workman in London were to go to look at this machinery for the purpose of seeing how far he might

carry contrivances of his own, without infringing this, I ask how does this give him information? He finds no distinction of the parts; he finds all described as the invention of the plaintiff, for he says: My invention consists in so and so, and the parts are put together so and so. All this is calculated to mislead the public, and to lead them to believe that he has a right much more extensive than he is entitled to, and this I apprehend will be a complete answer to this action. But let us look at the evidence as it at present stands upon this point. [GIBBS, C. J. Try it in this way. Supposing that which you say was old was new, and suppose that the present plaintiff were to bring an action against a person for making a machine up to the extent to which you say it was old, could he recover upon this specification?] With that view I will direct your lordship's attention to the second count of this declaration, to show how they themselves have considered it.

This is the way in which they allege it in one count of their declaration,—“that the defendants did use and put in practice a part of the said invention in such letters patent mentioned, by then and there making and constructing divers, to wit, one hundred other machines for the making and manufacturing of bobbin lace or twist net of the said description and kind in the said letters patent mentioned, the said last-mentioned machines then and there being of the same nature and kind, in part with the said machines so found out and invented by the said John Brown,” so that we are charged with putting in practice this invention by making a machine of the same nature and kind in part with that invented and found out by John Brown. He says I have a right to the whole of this machine; I make use of a part of this machine, but I say it is not his part, and he is not entitled to it.

If the principle I am now contending for does not meet with his lordship's sanction, it is in vain for me to endeavor to press it upon the jury; but I contend that though a man may take out a patent for a machine consisting of a new combination of old parts, when he comes to specify what the nature of his invention is, he must describe it as a com-

combination of old parts, or discriminate between the new and the old. [GIBBS, C. J. You are upon the question whether he has taken his patent for too much : if this be new, he has taken this to himself, and taken it as that of which he has an exclusive right ; consequently, if you can show he has not the exclusive right to it, then he has no right to it.] I am extremely glad that what I say has the approbation of his lordship. That is the view we took of the case before we came here, and when you come to advert to the evidence as it has been already given, and to the further evidence offered on the part of the defendant, you will entertain no doubt as to the application of the principle to these facts ; for the essence of the invention is the construction or application of the brass bobbins, and that I shall prove is old.

Another very important part of the machinery is the dividers. I shall prove that they are old, and that they are used in all machines of this description. I have already stated to you that the fork-bar, which would itself be entitled to the appellation of a machine, is old, and has been used for the same purpose for which it is applied in this patent. I shall prove also a great many subordinate parts of this machine have been before used, and will leave it there, if indeed, after the evidence given upon these points, you should think any further evidence upon that part of the case necessary.

As to the specification, I am not one of those who think slight objections to a specification ought to prevail. If an ordinary workman can make a machine from it, that is what is considered sufficient ; but we have many witnesses, men of skill and eminence, who will say that that defect, with respect to the making the selvage, is a radical defect, and that, though the remedy is obvious when once it is found out, it is very difficult for a person, reading this specification, to guard against those consequences, which would ruin the lace. [GIBBS, C. J. I am averse to interposing as you go on, but I think it sometimes clears the case. It has struck me that, even if the prosecution of the manufacture be assisted by bending together two of the teeth of the dividers, or making one longer than the rest, if

that appears to have been a subsequent discovery, it would not break in upon the validity of the patent ; it would only show that the patentee has since found out the means of carrying on his own invention to better effect.] The way in which I stated it is this : If even the specification is vague, but a skilful workman can supply the defect, it is no objection to the patent ; but if I make a machine precisely to the specification, and find it does not answer the object for which it is intended, then I say it is no answer to say it will produce that effect by a trifling alteration. No alteration, however trifling, can be made in the specification, though facts may be supplied. Now you have heard that at the extreme point of the breadth, the machinery is precisely the same as in the middle part of the breadth, and it is obvious, therefore, that the same effect would be produced at the extremity as in the middle ; the consequence of that would be that the threads would be carried into the next breadths, for the operation of the weaving is to carry the threads diagonally : that would therefore carry the lace on, and entangle it with the next breadth ; and certainly this is one of the objects to which the attention of persons has been for some time directed, namely, to make lace in breadths, and to make it with perfect selvages. A great deal of attention and money has been expended in those inquiries, and what occurs to us is that at the time the patent was taken out, the mode of preventing it was not stated, that no person might have an opportunity of making a machine to interfere with the plaintiff's. There is not a single machine used by the plaintiff in which this is not obviated by some contrivance or other. It may be said, this may be remedied by the hand, but that I conceive is no answer ; this describes, not only the machine, but the mode of making the article, and therefore, if this is to be picked out by the hand of the workman, that should be described in that part which relates to the working of the machine. Much money has been expended by parties for the purpose of getting rid of this difficulty, and we are strongly of opinion, from circumstances which I cannot state in evidence, that the concealment of the mode was intentional.

Now, as to the infringement. That our machine is similar to the plaintiff's I do not deny, but all the machines are similar to each other. The plaintiff has appropriated to himself several parts which belonged to others ; we may have taken something which exclusively belongs to this party, but I am not sure we have done so. The principal thing objected to us is the spoles or bobbins at the top, which the evidence is that we have copied. Now it appears that our spoles are of a different description, and I shall call Mr. Millington, who went down to Nottingham with Mr. Bramah for the purpose of inspecting this machine, who will tell you that he does not think these machines are similar, that there are many radical differences, and that they are similar only in those circumstances which are common to all machines ; but I think the question will not come to whether we have infringed their machine, but that the material question for your determination will be whether the patent as they have taken it out can be supported ; and I think when I offer to you the strong body of evidence I shall, you will be clearly of opinion that it cannot, and that the combination of old parts in this new machine, not being referred to as such, but being appropriated to the plaintiff as his own invention in this specification ; that is a vital defect, and sets aside this patent. [GIBBS, C. J. The first witness says, "I have never seen any machines which contain in whole, or in part, the two peculiar characters I have described, namely, the mode of obtaining the warp threads, and the mode of obtaining the diagonal threads." The warp threads carried on by the bobbins, and the beam threads carried diagonally ; that is his statement of the peculiar characters of this machine.] I think I may say that one of the questions which has been made in this cause is now pretty well out of the case ; that is, whether the machine which has been made by the defendants is an imitation and a piracy, that is totally abstracted from the question whether my client is entitled to this patent or not ; but Mr. Bramah, who went down to see this machinery of the defendants, told us that in his opinion, though with some alteration in the mode of constructing the machine, it

was an imitation and a piracy of ours, and I observed that Mr. Millington, who went down with him, has not in his evidence contradicted Mr. Bramah at all. Let this also be recollected that on the part of the plaintiff, probably, but for the circumstance of Mr. Bramah's having authority and order to go down, we had been without any evidence at all to prove how and in what manner this machine of the defendant's was constructed, so as to show, except upon the view of the article, that it was an imitation. But the defendant could want no witnesses ; he could have had a host of witnesses to prove the dissimilarity, if they were dissimilar, because the machine is of his own construction, and has always been in his own possession ; he knows who was the mechanic that constructed this machine for him, and that mechanic might have been called and have pointed out to you the essential differences there were between the machine used by Mr. Moore and that which I say has been invented by Mr. Brown, and for which, I contend, he has a right to maintain his patent. It is for that reason I think I may take upon myself to say that if the cause was to turn upon that question, whether the defendants had imitated the machine of Mr. Brown, the cause is out of court as far as relates to Mr. Moore.

Now, I have another observation to make, which is this : my machine, say they, has no novelty, no merits about it, but all the combinations were invented by others, and other machines had all the merit belonging to mine before it was invented. Then why did not Mr. Moore go on working Mr. Heathcote's machine, if he chose to pirate his patent, or working with his warp machine, using these which they call Dawson's wheels ? If Mr. Moore had chosen to go on working with Mr. Heathcote's machine, or the warp machine, or any improvement of his own, my client would not have come here to complain. All machines for the manufacture of lace, if they do not trench upon existing patents, are open to all the world ; all the world are at liberty to take all those things that are old, and to put them into a machine if they choose, and to combine those old parts with a new principle and a new application ; for let it be recol-

lected that that which I stand upon in my case is this : not that the frame is new, not that the eccentric wheel is new, not even that the bobbin is new, but that out of a great many old things put together my client has combined what I call a new thing, that is, a machine upon a new principle and producing to a certain degree new effects, though the combination of which that machine is formed is old, or the different things combined, I should rather say, are old.

My learned brother has attacked the patent on one or two grounds which I will state to you, before I come to state how this is a new machine, inasmuch as it is a new combination on an essential principle in lace-making, which however has been used ; yet this principle, supposing it to be new, says he, you have not specified, so that your specification will support your patent ; for if a man makes a new invention, whether a new invention of old things with a new combination, or a machine of which everything is new, he must specify that, so that persons of competent skill may be able at the expiration of fourteen years to make the thing of which he had the monopoly. Then on what ground does my learned friend attack our patent ? Why, he says, you claim your patent for a machine, as if everything of which it was composed were new. Now, I deny that proposition. I have claimed a patent for a new machine for the purpose of making Buckinghamshire lace, or that resembling it ; my patent and my merit consists in putting these different things together which are old of themselves and standing singly, for the purpose of working in a manner totally different from that which ever was worked before in lace-making.

If my learned brother's doctrine be true with respect to the specification, see what must be the consequence of it ; a man never invents a machine of which all the parts are new, and did any man ever see any specification stating this is old, and that is old, and so on ? In a specification for the improvement on a machine, I agree it must be so stated, and if my patent be good, which I think I may confidently say you will find it is, if whenever that fourteen years shall expire, any man shall invent, not a new machine on a new

principle, but a substantial and good improvement upon this machine of mine, that man who may take out such a patent then must not specify as here, but he must take out his patent for an improvement upon that machine of Mr. Brown's, and put in his specification what are the additions and improvements he makes to that machine. But that is not the case here, for upon the very looking at the statement of the specification as referring to those most intelligent drawings, I say the patent when it is read presents to the mind, and the specification as referring to the drawings presents to the mind, that the principle of the patent is a machine composed, if you please, of old parts, but upon a new principle, to produce a new effect in the mode of working lace.

Now when I have heard it said by persons on the part of the defendant that, looking at that specification, they could not make the machine by it, I do not mean to say those persons tell you what is untrue or palpably false, or anything like it; it is matter of opinion; but then we must take the extent of the capacity of those who tell you that they can do it, and the extent of the capacity of those who tell you they could not. I must look to the resources of Mr. Galloway's great mind, and I say that not only he, but the other gentlemen we have called, are judges of the quantity of skill requisite to make a man a competent and fair workman, just as well as the workmen themselves, and they tell you that there is no man who brings a fair and competent degree of skill to market but would from that specification make it. Mr. Keir's evidence was extremely strong upon that subject, for he stated this, that he never saw any drawings in his life that afforded more information, or better means by which to make a machine.

Then let us see whom we have called next, Mr. Maudslay; he is not only a man of science and of skill, but he is a man who has been in the habit of constructing machines. [GIBBS, C. J. I think you have nothing to meet you upon this subject, except the question of the breadths; the other is most satisfactorily proved. With respect to the division of the breadths, that is a point in the case.] Then upon

the subject of the division which has been pointed out, his lordship made an observation in the course of the cause which struck me as very strong, as applicable to this case. I will suppose, there being no division in that specification, that Mr. Brown has, since that specification, devised means by which the thing may be divided : that would not belong to this specification. [GIBBS, C. J. I threw that out principally that you might avail yourself of it ; but I think the way of availing yourself of it was to show that you had, after your patent issued, made any one machine for your own use without bending the wires, or in some other mode producing this ; I threw that out to you on purpose.] What I was about to state is this : we have not shown that we have worked a machine without a specific division. [GIBBS, C. J. The way in which that turns upon you is this, that you knew a better way of doing this than you communicated to the public, and kept back that better way, in order that after you had got your patent you might still have an advantage in the manufacture. That is the way in which it is put.] There are many cases in which that might be inferred, and whenever circumstances of suspicion arise, you would infer that it had been kept back ; but you cannot suppose this to have been purposely kept back when you take the evidence of Mr. Galloway and Mr. Keir, who said the division was not necessary to be stated, for that the workman's own knowledge, the skill of the operator, I think he said the knowledge and the common and ordinary skill of the man who was to set the machine in operation, would be sufficient to mark out to him that he must leave a certain space between the two, in order to prevent the entanglement, which, it is supposed, would take place. Now if that be so, the circumstance of that division not being mentioned in the specification affords no argument at all, and no foundation for the observation that it was omitted with any intention ; it affords no inference that Mr. Brown left this out for the purpose of giving an imperfect machine to the world ; but on the contrary, that he did not think that it was absolutely essential to the working of this machine, for Mr. Galloway said this : " When I saw the speci-

fication, there being no division marked out, I thought it would produce an entanglement ; but when I went and saw the thing worked, I was astonished to see that it did not produce that effect," that is to say, I was astonished to see that the mention of a division was not essential to the working of the thing. I admit he at the same time said this : " It would require more caution in the workman to avoid it ; it might require more time to make the lace ;" it might require the workman to work slower, to see that effect was not produced ; but still that is not one of the essential parts of the machine, or the combination of the machine, or a thing the leaving out of which can be said to invalidate the patent. It may work without that stop which creates the division ; then, if it may work without that stop which creates that division, why is it to be inferred that that was a part of his original conception, and that he kept back and avoided giving that to the public ? It is impossible to conceive that a man would have put the whole of his machine in hazard and in danger ; that he would have defeated the whole of the intention of that patent by omitting to point out in his specification something which the common and ordinary prudence of every workman would necessarily guard against. It is very much like that objection put by my learned brother, which he seems in the latter part of the cause to have dropped : that the upright bar is in a curve, and that the specification does not describe the foot. The answer to that was this : why, no workman need have that pointed out to him, for he must know it was to rest upon something. So, I say, when a man considers the nature of the specification, it must necessarily occur to him that there must be a division to prevent the entanglement, and that entanglement is prevented by that which is one of the important parts of the invention, totally different from any thing used for that purpose before, namely, a planetary wheel, as Mr. Galloway called it, that is, God knows, old enough ; but not that rotary roller or beam which is part of this machine, for the express purpose of preventing that entanglement, which, without that, might probably have taken place. At the time Mr. Brown put that specification

upon the record, he neither thought it necessary, nor do I know that it is essential, that there should be that stop ; the thing is better with it, I agree, but the not having it does not give a vital stab to this patent or this specification, nor anything like it, and that, I think, is the only part to which this objection is made.

There was another witness who added very considerably to the testimony of Mr. Galloway and Mr. Keir upon that subject, and that was the foreman of the lace-maker, the man who is to set the machine in operation and make it work ; and he stated that they did not even give instructions to the lace-man who was set to work the machine, because the common prudence and common consideration of any man who was set to work the machine would supply the defect by his own understanding. Then I say the mention of this was not necessary, though the thing may be better with it ; and though Mr. Brown might say, in order to prevent this, let us put something in here : and one of the witnesses proved that sometimes there was one thing and sometimes another put there, to make the division, because, certainly, it does to a certain degree save time, and prevent the same degree of caution being necessary ; it quickens the course of the operation, and enables a man to work faster than he would do without it ; but how does that furnish any ground for the inference that there was the slightest intention in Mr. Brown's mind to keep back anything that was essential to be described, or to be given to the public ?

Now, if a man does intentionally subtract anything material and important to be given to the public, certainly it would be a vital objection to his patent ; but when you come to consider the different and minute parts there described, when there is such a complicated machine to describe, though producing so simple an operation as is performed by the ten fingers of an old woman upon a pillow in Buckinghamshire, it is a matter of astonishment that something else did not happen to be omitted. I think that specification forms as strong a proof of a man's sitting down with the intention to give a description of every minute

part as any specification ever put upon the table of any court of justice.

Then comes the question, whether we are entitled to maintain our patent or not ; because this is not a new combination, or because we have been pirating the patent of some other person. I know this, that if a person chooses to take out a patent for that which is not new, for which another has a patent, he cannot support it, whether that person brings an action or not ; but it is most extraordinary, considering Mr. Heathcote's patent to have been taken out in 1809, and Mr. Brown's in 1811, that the first time the question comes to be discussed in a court of justice, whether Mr. Brown has adopted that which Mr. Heathcote had given to the world, should be an action which Mr. Brown has been obliged to bring, not against Mr. Heathcote, or anybody interested under him, but against some person who has pirated his patent ; and that Mr. Heathcote has never thought fit to bring any action into a court of justice ; and yet I cannot believe that if Mr. Heathcote could make out that we had pirated his patent, he would be disposed to spare us. But there is a most essential and important difference between the two machines, and, as far as relates to the commodities produced, between the two commodities ; you have had evidence of that from the commodity itself. To-day we have had samples produced of two breadths, the one from Mr. Brown's machine and the other from Mr. Heathcote's, and I take leave to say that the one has perfect selvages and the other has imperfect selvages, and nobody could sell that lace, with those selvages, without either the seller or the buyer cutting off those selvages, for I am sure no woman would take that to put an edging to a lady's cap without cutting off the selvages. I do not know whether this was stated by Mr. Galloway, but if the lace is worked by the hand, it may be always so correct as to produce perfect selvages ; but if the machine is not constructed so as to work perfectly, the selvages will not be equal to the other meshes in it, and they must be cut off. It may be said, what is the loss of cutting off one of these selvages ? Very considerable, both in the time it takes and in respect of the commodity itself.

Now how is the difference produced ? It is obvious, upon the very principle of my patent. By all the old modes of making lace by machines, the warp thread is that which is fixed from the beam ; and by my mode of making it, the diagonal thread is that which is fixed from the beam, and the warp thread is that which goes through with the bobbin. It has two operations : it makes the selvages perfect, and it does more, it enables them to make pieces of a larger fabric, which in lace and all other commodities is of considerable consequence ; for when the warp thread is fixed upon the beam, the diagonal threads being considerably longer than the others, you cannot make a piece of the same breadth, because you must have a certain number of yards round your bobbins. And be so good, when we come to consider the testimony of witnesses, as to remember this if Mr. Galloway is a judge, if Mr. Keir is a judge, and Mr. Turrell a judge of these things, they all tell you they consider it as an essential principle and a great improvement that the warp thread is enabled by this machine to be the actor, and the diagonal thread to be acted upon instead of the former mode. [GIBBS, C. J. I do not think you need waste yourself upon this part of the case, because I take it to be a part which has not been at all disputed that when you get up to the time of crossing the threads, after that yours is an invention.] Then if that be so, and manifestly and obviously it is so, I consider that is the very thing which establishes my proposition. If the diagonal thread was passed, in my machinery, through the bobbin, as in Heathcote's, and if after we had performed the operation of twisting, we had made an improvement upon the principle of Mr. Heathcote's, then, perhaps, our patent would not have been good, as being taken for a machine and not for an improvement ; but this arises from the application of a new principle ; the warp thread is not any longer to be the substratum. If Mr. Heathcote had adopted that, and after he had adopted it we had made an alteration in the after operation, that would have been another thing ; but the after improvement which is produced is the consequence of the original principle upon which our patent goes. Then,

if that be so, I conceive that I do make out the proposition that this machine, though a combination of things which, taken separately and distinctly, are old, yet is a combination upon a new principle, and I think we might have put it in our patent in this way. We might have said, ours is machinery by which the warp thread is to be worked by bobbins through the diagonal thread instead of the mode heretofore adopted by working the diagonal thread through the warp thread. Then how is that done? Not by adding anything to Mr. Heathcote's, but by combining the parts together as they are combined in our machine. It is not that we travel together to a certain stage, we set out on a different principle; so far we travel together, that a thread hung vertically is passed into a thread moved horizontally; but the principle is that the horizontal thread is the warp thread, horizontal in passing through, though with a little curve; and that the vertical thread is the thing acted upon. If I am right in that, and if the witnesses are right in their judgment, I conceive I am entitled to your verdict.

Now with respect to one part of the case, there was one part of Mr. Galloway's evidence in which my learned friend, when cross-examining him, asked him as if it was matter of opinion, and Mr. Galloway said, I am speaking to a matter of fact from my own observation. The question is this: Are you not satisfied upon the judgment of Mr. Galloway, Mr. Keir, Mr. Turrell, Mr. Bramah, Mr. Maudslay, and the lace-maker himself? I do not depend upon him as to the construction of the machines, but he has, of course, judgment as to the mode of producing lace. They tell you that, though there are bobbins in Heathcote's and bobbins in ours, the principle of combination is not the same; the roller at the bottom is in every common weaver's engine, and there must be all these things, though, perhaps, not operating in the same way as in this; but the main and substantial thing is this, that the warp thread is the agent, and the diagonal thread that acted upon, producing the same thing, but with this additional benefit, that it produces lace much more perfect than that made by Mr. Heathcote's or any other machine.

I will now leave the case in your hands, subject to the directions you will receive from his lordship. Upon the whole, I apprehend I am clearly entitled to your verdict for the plaintiff.

GIBBS, C. J. This is an action brought by Mr. Bovill against Mr. Moore and others, for having infringed a privilege granted to Mr. Bovill for the sole use of a machine for making lace; and the questions are whether the patent, under which he claims the sole privilege of making this machine, be a legal one, conferring upon him that sole privilege, and whether the defendant has or has not pirated it. It is necessary for the plaintiff to show that he is entitled to this sole privilege, and that the defendant has pirated it, and that he, the plaintiff, has conformed to all the conditions upon which this privilege was granted to him, if it was granted at all, in order to entitle him to recover under this action.

The case is stated differently in the different parts of this record. It is stated that the defendant made a machine like the plaintiff's; it is stated that he sold machines like the plaintiff's; it is stated that he imitated the machine of the plaintiff; and it is stated that he imitated parts of the machine of the plaintiff.

They have produced the patent granted to the plaintiff for a machine for the manufacture of bobbin lace or twist net, similar to and resembling the Buckinghamshire lace net, and French lace net as made by the hand with bobbins on pillows. It is for a machine of this description the plaintiff has obtained his patent. The patent which is granted to him contains a condition which, if it be not performed, the patent becomes void, namely, that he shall, within a certain period, register a specification of his invention in the Court of Chancery, the object of which is that he, enjoying the privilege of this supposed invention of his for such a number of years as the legislature grants it to him, shall describe the mode of the manufacture, so as to enable any person to make it after his term is expired.

This specification contains an account of all which is

stated to be invented by him, and he is bound to confine himself to that which is his invention ; and if, in his specification, he has exceeded the limits of what he has invented, and of which he is entitled to the sole privilege, though in other respects there may be no objection to his patent, that will overturn it, for he will not then have registered a specification of his invention ; it will be irregular in having exceeded the limits of that invention.

Having made these general observations, I will state to you in what manner he has introduced this in his specification, " Now know ye that in compliance with the said proviso, I, the said John Brown, do hereby describe and ascertain the nature of my said invention," which he has recited to be that which I have stated from the patent, " and in what manner the same is to be performed and operated by the plans or drawings hereto annexed, and in the following description thereof (that is to say), my invention consists as represented by the drawings hereto annexed, and as hereinafter described." Whatever therefore is contained in the drawings annexed is claimed by him as his invention, and if it be his invention he is entitled to maintain an action against any one who shall either practise the whole of this invention or shall practise any part of that which he states in his specification to be his invention.

In point of law it is necessary that the plaintiff should prove that this is a new and useful invention in order to entitle himself to the present action. That I think he has satisfactorily done, and no resistance is made to his claim upon that ground. It is not pretended that the invention as far as respects a certain part of the manufacture is not new, nor is it pretended that it is not useful. I need not therefore leave it to you as if there was any question on this part of the case.

Then the next question is, whether the specification would enable a workman of common skill to make the machine. Upon the evidence adduced to you I think there is no doubt it would, for with the exception of some slight difficulties thrown in the way, I think the evidence is uniform that a workman of common skill, applying a great

deal of attention to it (which so complicated a machine however described must require), and bringing a competent degree of skill would be able to make the machine ; therefore I think you may discharge your minds from that consideration.

There is another consideration respecting the specification which is also a material one, and that is whether the patentee has given a full specification of his invention, not only one that will enable a workman to construct a machine answering to the patent, but one that will enable a workman to construct a machine answerable to the patent to the extent most beneficial within the knowledge of the patentee at the time. For a patentee who has invented a machine useful to the public, and can construct it in one way more extensive in its benefit than in another, and states in his specification only that mode which would be least beneficial, reserving to himself the more beneficial mode of practising it, although he will have so far answered the patent as to describe in his specification a machine to which the patent extends, yet he will not have satisfied the law by communicating to the public the most beneficial mode he was then possessed of for exercising the privilege granted to him.

In the present case, this I think appears clearly proved : that lace may be made in breadths without resorting to the means that certainly have been used, either of bending the teeth of the dividers or making the external tooth longer ; and it is certainly clear that this specification does not point out to the artist that he is either to bend those teeth or to make one longer than the rest. The effect of not doing that will only be that there will be danger of the threads entangling, but still with a competent degree of attention in the workmen, although with some delay of the work, that entanglement may be avoided ; or if not avoided, may at least be corrected as it occurs, so that the work may be performed, though in a less perfect degree, without this bending together of the teeth, or without the inserting teeth longer than the others. If Mr. Brown, since he obtained his patent, has discovered an improvement effected by

bending the teeth or adding a longer tooth, he may apply that improvement, and his patent will not be affected by his using his own machine in that improved state ; but if at the time when he obtained his patent he was apprised of this more beneficial mode of working, and did not by his specification communicate this more beneficial mode of working to the public, that will have been a fraudulent concealment from the public, and that will render his patent void. Now the evidence in the case stands thus, that there is no machine of Mr. Brown's proved ever to have existed without this improvement, which is certainly a considerable improvement in it. I threw out this view of the case that it might be shown, if it could, that Mr. Brown had used any of his machines without that improvement. No such evidence has been produced, and therefore I must take it that no machines have been used by Mr. Brown without that improvement. Now if, upon the whole of the evidence, you think this was industriously and studiously kept back from the public, that Mr. Brown might have an advantage over and above others that worked these machines, that will be a suppression that will avoid his patent ; but if you think this was a matter which had not occurred to Mr. Brown at the time he invented this machine, and that it was an improvement afterward, the validity of the patent will not be affected by it, though he will have added to his original merit of invention the further merit of being able to use his own invention more beneficially than the patent points out.

Having disposed of that part of the case, and having stated to you, as I believe I have, that it is admitted on all hands that the patent, if a valid one, has been infringed, having freed the case of those questions which arise in it, I come to that which is the most material, namely, whether the specification in this case be or be not a good one in respect to the extent of it.

I understand the case better now than I did in the outset, though I cannot say that I understand it in a way so satisfactory to myself as I could wish. I collect, however, from the testimony of the plaintiff's witnesses, what they contend

their invention to be, in what its novelty consists, and what are its merits ; and, in order to state these, I would refer to the evidence of the first, and who is certainly not the least, perhaps I may say he is the most intelligent of their witnesses. He clears the case of all the preceding difficulties of it on all those points upon which I have already troubled you, and upon this question being asked, what the particular merits of this invention were, he says, " The advantage of this machine is that the twist can be performed by the agency of the bobbins which, if they came from the common beam, could not be performed ; the diagonal threads come off a roller or beam which revolves round its axis to which the diagonal threads are fixed, and the roller so clothed with threads has a species of planetary motion by which the threads traverse right and left, the effect of which is to dispose of the diagonal threads over the whole breadth of the particular piece of lace." Now there he commences his description of the advantage, and he shows a piece containing two of the diagonal threads in black thread. In order to explain the manner in which they pass across, he says, " I never saw any machine that acted in this way before ; I have never perceived any which contained, in whole or in part, the two characters which I have described, namely, the mode of obtaining the warp threads, and the mode of obtaining the diagonal threads. These effects are produced by a perfectly new mechanical operation. These two points constitute the originality of the machine in their combined character ; that is, you see, making the feeding the warp threads, which are the upright threads in the bobbins, in the way in which they are fed, and contriving to carry the beam threads in the way in which they are manufactured. In these particulars, Mr. Galloway states that the novelty and the merit of the invention consist ; and there is no doubt, as I stated to you before, that this is a beneficial invention for the public, and that in this respect it is new. But, although it is beneficial for the public, and may, in this respect, be new, yet if the plaintiff has in this specification asserted to himself a larger extent of invention than belongs to him, if he states himself to have invented that which was

well known before, then the specification will be bad, because that will affect to give him, through the means of this patent, a larger privilege than could legally be granted to him.

I have stated in what terms the specification runs. The defendant says, I do not dispute your specification, after the operation is brought to the point of crossing the threads, except in this respect: I say your cross-bar and your fork are not new, and that therefore in claiming them you have claimed too much. With respect to the contrivance of applying the beam threads to the diagonal, that I admit to be new. I admit that may be an excellency, and I admit that your specification for that part of your machine is a perfect one; and if you had expressed yourself in this way, if you had stated that you had invented an improvement of the existing machine, and that it followed that period of the process I have been describing, I would not have quarrelled with it; but I insist that all that precedes that part of the operation was old, and had been practised before; and the defendant calls several witnesses to show that under the warp machine, and under Heathcote's machine, all that precedes in this operation had been previously practised by the same means; that is to say, in substance, by the same means as it is described in the specification of Mr. Brown, and actually practised by Mr. Brown. I say by the same means in substance (it will be the same in substance if the principle be the same in effect), though the form of the machine be different.

I remember that that was the expedient used by a man in Cornwall, who endeavored to pirate the steam-engine. He produced an engine which, on the first view of it, had not the least resemblance to Boulton and Watt's,—where you looked for the head, you found the feet, and where you looked for the feet, you found the head; but it turned out that he had taken the principle of Boulton and Watt's; it acted as well one way as the other, but if you set it upright, it was exactly Boulton and Watt's engine. So here I make the observation, because I observe it is stated that one acts upward and the other downward, one commences from the

bottom and produces the lace by an upward operation, the other acts from above and produces it by an operation downward ; but that, if the principle be the same, must be considered as the same in point of invention.

The defendant has called several witnesses to show that these early parts of the invention were in use before the time when Mr. Brown's patent was granted.

The first whom he has called is Mr. Isaac Hawkins ; and he says he has considered Heathcote's specification with great attention ; he says the bobbins in Heathcote's are placed in carriages, and passed through the perpendicular threads. Heathcote's bobbin travels round a perpendicular thread to form the twist, and then two move diagonally in opposite directions to form the cross. In Brown's, the bobbin travels round the perpendicular thread to make the twist, and then two of the perpendicular threads are made to cross each other to form the mesh, then these two perpendicular threads become diagonal ; in both, the bobbins go round the perpendicular threads. Now, up to this point, the operation of the two machines is similar. The cross-bar of the lace, he says, is differently formed : there Brown's machine varies from Heathcote's ; the bobbins in both machines move in a curve—Heathcote's under, and Brown's over. This is necessary to give a uniformity of tightness to the thread of the bobbin. There is in Brown's a centre bar, and in Heathcote's a point bar to keep the work down to its proper dimension. The motions of these are very similar.

Being questioned upon this on his cross-examination, he says, the distinguishing difference between the two machines is that in Heathcote's the diagonal thread proceeds from the bobbins ; in Brown's, it proceeds from the beam threads. The crossing, he says, is obtained by a different system, and that is material. And so you see he said in his examination in chief. Up to the crossing, he says, the operation of the two machines is perfectly similar ; at the crossing they vary, and Brown's then assumes an operation which does not belong to Heathcote's.

Then the next witness is Mr. Silvester, who says that

Heathcote's machine has bobbins very similar to this, only rather larger ; that they are used alike in both as to the operation of twisting ; that Heathcote's machine was in use two years before this patent ; and he says upon looking at Brown's, he thought Brown's, as far as it went, an imitation of Heathcote's ; the impression upon his mind was that Brown in constructing his machine had, at least to a certain extent, imitated Heathcote's machine ; he says it is made to work downward instead of upward. Both go on rollers.

Mr. Millington is a civil engineer and philosophical lecturer in London, and he gives you a more full account of this than I think the preceding witnesses have. I should state to you that the plaintiff's specification is divided into different sections ; there are six sections, and he gives an account in each section of the component parts that form so much of the machinery as is described in that section. And there is one section, No. 5, to the whole of which the model produced on the part of the defendant, according to the witnesses, applies. Mr. Millington, having first said that he had studied the plaintiff's specification and seen the model made according to it, says, " I also saw several of the plaintiff's machines ; six or eight cursorily, and one I examined minutely. I saw also a common warp lace-frame in use at Nottingham, and also a point net-frame. This, of which I now see a model (which, by the admission of all parties, forms the whole of section 5, in the specification of the plaintiff), forms part of the warp net-machine." So that all those parts and the combinations of them which are combined in section 5 of the specification are found in the warp net-machine, which existed long before. This witness says also that there were point bars in the warp net-machine, constructed nearly like the plaintiff's.

They are put in motion by a spindle and arms, and a crank in the warp-frames. It is moved by a spindle and a kind of swivel bar hanging upon pivots : this is essential to the warp-engine ; they are both applied to the same purpose, that of carrying up the stitch and holding it in its situation. I have seen Heathcote's specification ; the general movement of bobbins in it is the same in principle as

in the plaintiff's. I agree in this with the last witness. Heathcote's, I think, in this respect is better ; the bobbins are constructed alike ; the threads are a little different ; there is no difference in principle, only in form, in the facility of laying hold ; in the machine shown to the jury, the bobbins do not agree with the specified form of the bobbins, but they approximate more to Heathcote's, and do not agree with the drawing to the specification ; they are placed in combs in both cases, and in both they are unlocked in the same way. The locking is more perfect in Heathcote's ; in both they move in a circle. In Heathcote's there is a point bar to raise up the work ; there the machines are very similar, that is, Heathcote's and Brown's ; and therefore it is possible that when he spoke of the point bar before, he was speaking of Heathcote's. " I should say Brown's was an imitation of Heathcote's, if he had seen it ; two men may make the same thing, each without knowing what the other has done, but if I had known that he had seen Heathcote's, I should certainly say that made last was in imitation of the first. The spoles are an improvement, they fall into a subsequent part of the operation ; the construction and movement of the bobbins is an essential part of the machine : in that respect the two are alike as to the twisting ; till they come up to the crossing of the threads, the machines resemble each other ; after that a different manipulation takes place." I am glad the gentleman used so particular a word, because that fixes it in one's mind. He added, " The combination of principles of which this model which I hold in my hand is composed is to be found in the warp-machine ; a machine which, ended with this, would be a useful one, though of course not so useful as those which contain further improvements."

Then Mr. John Farey, a civil engineer, says, " I think Brown's machine has combinations which are in Heathcote's, and which produce an effect upon the lace. I have examined Heathcote's and seen it at work ; there are bobbins used ; in that respect the operation is the same in Brown's up to the crossing ; then it becomes different ; there is great merit in the former part."

Upon cross-examination he says, "You can hardly make a new combination without embracing old combinations. I have seen Dawson's wheels in the warp-machines; it is introduced into Brown's, but Brown's goes further. Brown's machine has some combinations which were in Heathcote's, and which produce an effect upon the lace; there is this difference, that the diagonal threads come from two different quarters."

Then the next witness is Mr. Thomas Brookes, who says, "I have been employed some years in making lace; I have observed the bobbins in Brown's specification; I knew them used in the lace manufactory three or four years before Brown's patent. I know what is called the gibbet; that also was used in the warp-frames. I know the drivers, which drive the wheels which we call cloggers, and the wheels and cross-bar; they have been used in the warp-machine which I have known fifteen years; they produce the same effect as in Brown's machine: Brown's machine could not do without them. I use a machine for the manufacture of this species of lace which I formed before Mr. Brown took out his patent."

Then the next witness is John Tarrett, who speaks of the forks and the dividers being used in lace machinery two and thirty years ago. Morris had a patent for them in 1782, and the witness says he was his servant. The forks take the threads out of the dividers.

Now, gentlemen, the objections made to this specification, upon this part of the case, are that it goes further than it ought; that it states more to be the invention of Mr. Brown than really was so; and I think I may state generally to you that they say that all that precedes the crossing of the threads is old, whereas he has stated it as a part of his invention; and besides that, they state that the forks and the dividers, which he has stated as a part of his invention, are equally old. I think, with respect to the principle, if there existed at the time Mr. Brown took out his patent, engines for the making of lace, of which his was only an improvement, then his patent ought to have been only for an improvement; and certainly, even if he could have sup-

ported his patent for an engine, his specification ought to have pointed out those parts only which were of his invention as those to which his privilege applied ; and if you shall be of opinion that he has in his specification stated more than he is entitled to, by the proof in the case as what was his invention, then in my opinion the specification will be bad.

Now the answer that the plaintiffs have endeavored to give to that objection is this : they say there is nothing in the world that is absolutely new ; you may refer it all to first principles : the wheels are well known, and yet you may state them in your specification as one of the means by which you effect your purpose ; levers are well known, but yet you may state them in the same way : that certainly is so. They go on to say, their invention consists not in this or that particular part of which their machine is composed as being new, but in the conformation of all the parts of it, the novelty consisting in that conformation ; and if the new conformation of all those parts was of the plaintiff's invention, then, although every one of the parts was old, they would be entitled to a patent for a machine composed by that new conformation of the whole ; but if you find that another person had combined all those parts up to a given point, and that Mr. Brown took up his combination at that point, and went on combining beyond that, if the subsequent combinations alone were his invention, the former combinations he will have no right to. Those combinations could not exist before, unless there had existed an engine in which they were found ; and if there existed before this time an engine in which they were found, it is for you to say whether this which Mr. Brown has invented is any more than an improvement of that engine, or whether it is the invention of a new engine. If Mr. Brown has only invented an improvement of the old engine, be it Heathcote's, or be it any one or two engines which existed before, then his specification, by which he claims the whole to himself, will be bad. If, on the other hand, you think that he has invented an engine which consists of a perfectly new conformation of parts, although all the parts were used

before, yet he will be entitled to support his patent for a new machine.

Now I wish to have what I state upon this subject observed by the counsel on both sides, that they may be aware how I put it. If a conformation of those parts existed before ; if a combination of a certain number of these parts existed up to a given point before, and Mr. Brown's invention sprung from that point, and added other combinations to it, then I think his specification, stating the whole machine as his invention, is bad. If, on the other hand, you think he has the merit of inventing the combination of all the parts from the beginning, then I think his specification is good, and that he is entitled to your verdict. I have said nothing upon the fork-bars and dividers, because precisely the same question arises out of them, only not so strong for the defendant ; therefore, I think the case would be encumbered only by my saying anything upon the subject.

The counsel will take a note of the manner in which I have left the case to you ; and you will say first, whether you think there is any fraudulent concealment in the specification ; and next, if there was not, whether you think he has in his specification described an invention, as I have stated to you, to a greater extent than the proof goes to establish.

A Jurymen. It might be inadvertent, and not fraudulent.

GIBBS, C. J. Certainly ; and if it was inadvertent, if he actually knew, and meant to practise that mode, and inadvertently did not state the whole in his specification, he must answer for his inadvertence ; but it might be a subsequent discovery.

Verdict for the defendant.

GIBBS, C. J. Gentlemen, I will just ask you this : Do you find that the combination of the parts up to the crossing of the threads is not new ?

Foreman of the Jury. Yes, my lord.

A Jurymen. The threads then taking a new direction, and certainly the most valuable part to the plaintiff, is a new invention ; but we are of opinion it is nothing more than an improvement.

BOVILL v. MOORE.**Common Pleas, May 3, 1816.***Breadth of Claim in Specification. Invention of Improvement.*

A patent for an addition or improvement must be limited to the addition or improvement. If it comprises the entire machine, it is void.

Rule to set aside a verdict for defendant and grant a new trial.

The report of the trial of the cause is at p. 231. It then appeared that the merits of the invention (a machine for lace-making) consisted in the mode of supplying the longitudinal or warp threads, and the diagonal threads respectively; the former being supplied from distinct magazines, called bobbins and jacks, instead of from the beam, as in the common machines; by which means the workman was enabled to form his twist by their agency, which otherwise he could not have done; the latter being supplied from a roller or beam, to which the diagonal threads were fixed, and which, by means of a planetary or rotatory motion, disposed of those threads over the whole breadth of the piece of lace. On the other hand, the defendant proved that up to the point where the perpendicular threads cross each other for the purpose of forming the mesh, the operation of the machine was similar to the old machines, and particularly the one for which a Mr. Heathcote had obtained a patent two years previously to that of Brown. The Chief Justice told the jury that if they thought Brown had invented a perfectly new combination of parts from the beginning, though all the parts separately might have been used before, his specification would be good; but if they should be of opinion that a combination of a certain number of those parts had previously existed up to a certain point, and that Brown had taken up his invention from that point only, adding other combinations to it, then his specification, which stated the whole machine as his invention, was bad.

The jury were of opinion that up to the point of crossing the threads, the combination was not new, and accordingly found a verdict for the defendant.

The *Solicitor-General* now moved that this verdict should be set aside and a new trial granted. He admitted that the operation of the machine in question was, to a certain extent, the same as the former ones ; but he insisted that the effect thereby produced was wholly different, viz., in the manner of supplying the threads. The good effect of the invention was not disputed, and that effect was begun to be produced the moment the machine began to work, though neither the novelty nor the excellence of the invention were immediately apparent. An improvement, in the legal sense of the word, was an addition made to the machine, which was to take effect in a subsequent stage of the operation ; whereas here, the whole texture was carried on by a new process. He therefore contended that the specification was correct in setting forth the whole machine by which this operation was produced.

GIBBS, C. J. If I really felt any doubt as to the propriety of this verdict, or thinking as decidedly as I do that the verdict was correct, if I found there were any doubts in the minds of the rest of the court, I should be desirous of granting a rule to show cause, because this is a question of great importance to the parties ; but after giving all the consideration possible to it, and after attentively hearing all that has been urged on the part of the plaintiff, no doubt remains in the minds of any of the court. I think a little confusion has been made between a new machine for making lace, and lace made in a new method by a machine partly old and partly new. In order to try whether it be or be not a new machine throughout, we must consider what the patent purposes to give to the patentee, and what privileges he would possess under the patent. Now, the patentee is entitled to the sole use of this machine ; and whoever imitates it, either in part or in whole, is subject to an action at the suit of the patentee. Suppose it had been a new invention from beginning to end, and after Brown had obtained

his patent, Heathcote had made a machine like those which he now makes, is there any doubt but that such a machine would have been an imitation, in part, of Brown's invention? Indeed, all the defendants' witnesses agreed in stating that though the same thought might have occurred to two persons, yet if Brown had seen Heathcote's machine before he made his own, they should have had no doubt but that, up to a certain point, Brown's was an imitation of Heathcote's. It is not immaterial to consider that the drawings or plans of the machine were divided into six different sections, each containing a part of the machine in a different stage of its progress; and that as to one of them which contained all the principle of the warp, the witnesses said that every part of that section existed in the old machine; and that a machine carried no farther than that would have been a very useful invention. How, then, can it be said that Brown's specification, which described from its root a machine containing a part which was common to Heathcote's, does not contain more than Brown himself invented?

DALLAS, J. After the full investigation which this case has undergone, I feel no doubt which would justify our sending it to another jury. As to the law, it is quite clear that if the invention set up be only an addition, the patent must be for that addition only, as in the case of the invention of a particular movement of a watch. The case, therefore, resolves itself into a question of fact,—whether it be a new machine *in toto* or from a certain point only; and so far from its being an entirely new invention, the witnesses said that if Heathcote's had been made after Brown's, it would have been an infringement on Brown's patent; such patent, therefore, to the extent contended for, was void.

PARKE, J. The law was most fully and correctly laid down to the jury by his lordship. Nor is this new doctrine; for in the case of the King *v.* Else (*ante*, p. 40), Buller, J., held that the patent must not be more extensive than the invention; and therefore that if the invention consisted of an addition or improvement only, a patent for the whole machine was void. Now in the present case, the

jury have found that up to a certain point the machine acts like the former ones. The invention, therefore, is only a valuable improvement.

ABBOTT, J., was absent.

Rule refused.

Re LACY'S PATENT.

Chancery, July 25, 1816.

Sealing a Patent. Extending the Time.

The Chancellor will not defer affixing the great seal to letters patent for an invention, merely in order to enable the patentee to delay enrolling his specification, and so to keep his invention a secret during the time.

Bell stated that this was an application to the court, praying that his lordship would not put the great seal to a patent which Mr. Lacy, of Nottingham, had sought to obtain for making lace by a machine, to be worked by a steam-engine. The ground of objection to the patent was that Mr. Lacy wanted to keep his specification secret for the space of fifteen months, which was contrary to the policy of the law, and a great injustice to the king's subjects in general.

Romilly and *Hart*, on the part of Mr. Lacy, urged that no injustice would be done to the public by granting the patent, and the state would be benefited in a peculiar way. Mr. Lacy had invented a machine for making French lace of the most beautiful texture ; and if the benefit of his invention was secured to him, by enabling him to lodge the specification under certain restrictions, this country would be enabled to rival the French in the sale of that article in the continental markets. At present, the French, by having the materials and labor at a much cheaper rate, could afford to undersell us considerably in that very important branch of their manufactures ; but if this patent were granted, the saving, with respect to labor, would be more than equal to the difference in price of the materials. This

was the principal object for wishing to keep the specification secret ; for there was reason to apprehend that if the particular description of the invention should be enrolled within the usual period, copies thereof would be obtained by foreign agents and transmitted to foreign countries, the inhabitants of which would have the benefit of making use of the invention before His Majesty's subjects could by law make use of the same ; which would not only prevent the patentee from deriving the full advantage which he had reason to expect, but might also tend to diminish the benefit which the lace-manufactures of this country might otherwise derive therefrom. This was the ground upon which the legislature had thought proper to grant an act of Parliament (53 Geo. III., c. 179) to Mr. Lee, for securing his invention of preparing hemp and flax. By a proviso in the letters patent, which were granted for the term of fourteen years, that gentleman was allowed to keep his specification secret for fifteen months from the date thereof ; and with a view to secure the benefits of his invention to this country, the act directed that instead of causing the particular description of the invention to be enrolled according to the said proviso, he should deliver to the Lord Chancellor, within fifteen months from the date of the letters patent, a particular description or specification of the nature of his invention, and in what manner the same was to be performed, by writing under his hand and seal ; which specification, together with an affidavit made before a Master in Chancery, that it fully, completely and accurately defined and described the whole and every part of such invention and discovery, and the method of using and employing the same for the uses and purposes therein set forth, should be enclosed in a cover under the seal of the Lord Chancellor, and lodged in the office of one of the Masters in Chancery, to be nominated successively, from time to time, as occasion might require. The second clause of the act declared that the said packet should not be removed from the custody of the Master in Chancery on any account or pretence whatever, except by order of the Lord Chancellor, who should have power to call for and have the same whenever there

should be occasion to have recourse thereto, either on account of application being made for patents for other discoveries or inventions, which there might be reason to apprehend might be of a nature similar to the said invention, or on account of any trial at law respecting the same, or in any other case in which it might be judged by the Lord Chancellor necessary or proper to inspect the same ; in all which cases the seal of the said packet might be broken by the Lord Chancellor ; and after such use should have been made of the said specification as occasion should require, the same should be again sealed up, and deposited with a Master in Chancery, as before directed. And by the fifth clause it was enacted that the said packet, so to be deposited, should be kept and remain sealed and unopened (except as aforesaid) until the expiration of the term of seven years from the passing of the act, at which time the specification should be enrolled in manner directed by the proviso contained in the letters patent, there to be and remain public for the benefit of all His Majesty's subjects. These were the particular privileges which the Legislature had given to Mr. Lee, for the purpose of securing the benefits of his invention to this country ; and as Mr. Lacy had made an affidavit that he intended to apply for a similar act of Parliament, the learned counsel hoped that his lordship would not withhold the great seal from the patent.

Lord Chancellor ELDON said that he could not put the great seal to a patent which gave the party fifteen months to make out his specification. In the present reign thousands of patents had been granted, and this indulgence was extended only in two or three of them. Where the letters patent were for an invention to be used in England, Scotland and Ireland, the usual period for the specification was six months ; but where they were confined to England only, two months was the given time. Mr. Lee's case was a very peculiar one ; it was for securing to the state, in a time of war, the benefit of a most important discovery. If Mr. Lacy could make out that the state was to be benefited by his invention in any peculiar way, as in the case of prepar-

ing hemp and flax, it might be doubtful whether he might not have a secret specification. His lordship was of opinion, however, that the Legislature would pause a long time before they passed such an act in future; and he thought he might venture to say that if Mr. Lacy were to apply for such an act he would not procure it. The gentleman had said that if this specification was not kept secret the French might copy it; but his lordship could not establish a new principle merely to prevent the French from smuggling; neither could he put the great seal to a patent without seeing the specification, for it might turn out not to be worth a farthing, and then public genius would be discouraged merely for the benefit of the patentee. Many cases of this nature had occurred. The patent could not pass without the responsibility of the great seal; and if his lordship could bring himself to pass it, he might be called upon to give an account in Parliament why he had extended this particular privilege to this individual. It was certainly contrary to the general policy of the law, and he could not in justice to the king's subjects affix the great seal to it merely because it was a manufacture which other countries had in common with this.

WALKER v. CONGREVE.

Chancery, July 27, 1816.

Use of Patent in Government Service. Obligation of Injunction.

One who is using the patented invention of another in government service cannot on that account disregard an injunction restraining such use. The injunction must be obeyed until it is duly dissolved.

Motions by plaintiff to commit defendant for contempt in violating an injunction against infringement, and by defendant to dissolve the injunction.

The patent in question was granted to James Walker, dated September 7, 50 Geo. III., for "an improved machine

or vessel for the safe conveyance of gunpowder and for its preservation from injury by damp."

Romilly, for the plaintiff, now stated that defendant was chargeable with a violation of an injunction which plaintiff had obtained, and which injunction restrained the defendant from making, or causing to be made, certain barrels for preserving and conveying gunpowder, for which he, the plaintiff, had procured a patent.

Leach, for the defendant, stated that he had a notice of motion to dissolve the injunction in question, and requested to be heard first.

Romilly urged that as an injunction had been granted, the infringement of which was complained of, the question of that infringement should be first heard. The two motions were perfectly distinct. The court might be treated with contempt by breaking its injunction while that injunction continued, even though the defendant might subsequently state sufficient reasons why it should never have been granted.

Leach said he did not consider it a matter of much consequence which motion was heard first, but thought that neither of them could be heard to advantage while the models were not in court. Not expecting the cause to come on so soon, he had not yet received the models, which he expected in a short time. [The LORD CHANCELLOR. That, Mr. Leach, is a different ground.] *Romilly* then contended that as an answer was given in to the plaintiff's bill by the defendant without obtaining an order to dissolve the injunction, even though that injunction should be immediately dissolved, the defendant had incurred the penalties of contempt by infringing it while in force. He had always understood that it was not competent for a party, when accused of contemning the authority of the court by infringing its order, to plead in their justification that such an order to restrain should not have issued, that the patent which they were prohibited from imitating was not a good one, or that the machines which were alleged in the injunction to be copied from it were not imitations; yet such was the only defence contained in Sir William Congreve's answer.

Lord Chancellor ELDON said that there was nothing more clear or indisputable than what he was about to state. If a person procures a patent, going through the necessary forms, and obtains an injunction against an alleged infringement of it, his patent may still be found, upon examination, to be an improper one ; but the defendant, against whom the injunction is decreed, has no right to break it upon the ground that it should not have been granted. He might show the court reasons for dissolving it, but he himself could have none for breaking it. Again, the injunction might be granted upon a defective affidavit, though upon a strong representation ; but still the defendant would be bound by it, while it was in force, and would commit a contempt in disobeying it. In the third place, an injunction might issue against a public servant, who as such was not liable to the consequences of a private suit, and against whom an injunction should not therefore have been granted ; but even here the authority of the court must be respected, and the injunction dissolved by its own act, and not broken by the party whom it was issued to restrain. This was the clear doctrine of the court ; but when a motion was made for the penalties of contempt, all alleviating circumstances were matters for grave consideration. He would, therefore, hear first the other motion before he decided upon this.

Leach proceeded to argue that there had been no infringement of the injunction nor of the patent. 1. That the specification of the plaintiff's patent, though it could be made out to be new, was not of such a nature as came within the Statute of Monopolies, or did not exhibit such proofs of skill and invention as entitled it to the protection of that law that encouraged the exertions of genius by enabling its possessor to reap more exclusively its rewards. Not everything new was an invention worthy of a patent, nor could every original former of a machine be called an inventor. 2. The invention of the plaintiff, even if it were of such importance as to come within the Statute of Monopolies, contained no novelty, as a similar machine was employed at Woolwich in 1791. 3. The defendant's machines were both new and important ; and plaintiff had no right to restrain

the defendant from the manufacture of those which he was making, as they were no imitation of the plaintiff's patent, and therefore no infraction of the injunction of the court. The defendant, in his answer, submitted that he was not amenable for a contempt, as he was acting in a public capacity, and for the public service, while he superintended the making of the machines of which the patentee complained ; but on that ground the learned counsel did not wish to enter, as he was sure the government was not disposed, on the part of the public, to take advantage of a private individual. [The patentee was then allowed to explain to the court his invention, and showed the resemblance between the barrels of the patent and those made by defendant.] Counsel continued, that every novelty was not an invention entitled to the protection of the Statute of Monopolies. A new principle must be discovered ; skill and ingenuity must be exerted to entitle an inventor to a patent. The making of an old machine of new materials could not be a discovery ; and the plaintiff could claim no protection for an invention the only merit of which consisted in being made of brass instead of wood. When tea was first introduced into this country earthenware tea-pots were used : but could a person who made the first one of silver be entitled to a patent, restraining all his fellow-subjects from silver tea-pots except bought of him ? Next it was said that the form was new : but was the invention of making a barrel like a cylinder worthy of being protected by the Statute of Monopolies ? Well, said the patentee, but my barrel is strengthened with hoops ; and was it a new thing, displaying great ingenuity, to strengthen a barrel with hoops ? Was the circular aperture a great invention ? No, but the method of shutting it was new ; and that was the novelty of placing upon a circular aperture a common pot-lid. The different parts of the invention that are new are unimportant, and similar machines had been before used in the ordnance. Sir William Congreve did not consider he was infringing on the plaintiff's discovery. Since the injunction, he had refrained from making the barrels ; but having received a letter from the Ordnance Office to forward some which had been made

before for the public service, he forwarded them accordingly, considering it his public duty so to do.

Wilson, on the same side, said that Sir William Congreve resisted the injunction for the sake of the public, and not for his own advantage. Were the interests of the country to be delayed because an individual says, You are using my machines? But what could the plaintiff point out as original in his machines? It could not be in the aperture, it could not be in the hoops, nor in the manner of closing the mouth. It was sufficient to say that upon the answer the injunction ought to be dissolved. What was alleged to be done was not within the terms of the injunction. The injunction was to restrain Sir William Congreve, his workmen, servants and agents, from making, or causing to be made or vended, any more machines; and the affidavit of Sir William Congreve stated that none of these machines had been made since the injunction was obtained.

Romilly, in reply, said, as to the application to dissolve the injunction, the first question asked on the other side was, could the plaintiff have a patent for this? Could he have a patent for a bung, for a hoop, for a lid? He was pretty sure that the plaintiff never attempted to get a patent for any of these things. The real question was whether an individual, who combined all these things for the first time, was entitled to a patent for them. It was not to be allowed that each thing should be taken by itself, and then to say, for this one thing you cannot have a patent. The next question was whether this was a new invention. His lordship was to dispose of this only on the answer and affidavits, without taking into consideration the machines which had been shown. Now, he could not find it stated anywhere that machines of metal had been before made to answer the same purposes, and under these circumstances he submitted that the plaintiff was entitled to keep the injunction, and that there had been a violation of the injunction.

Bell followed on the same side. He conceived it was not necessary to show that all the parts of the plaintiff's machine were new. Again, it was not necessary to show that an invention was the result of long application or deep skill.

He remembered that, many years ago, ladies wore flowered tabbies, which were considered a very ornamental dress. The method of working the flowers was discovered by mere accident: a man having spit on the floor placed his hot iron on it, and observed that it spread out into a kind of flower. He afterward tried the experiment on linen, and found it produced the same effect. He then applied for a patent, on the ground of a new discovery; and having obtained it, he lived to make a very considerable fortune. A similar case was that of the steam-engine, where a boy, in order to shorten his own labor, tied a string with a knot from one part of a machine to another, which led to the most important improvement that had ever been known. The learned counsel humbly conceived that nothing like the plaintiff's machine had been hitherto used in practice. The only question was, how were flannel cartridges packed up by government before? They were packed up in a common wooden barrel, and not in a metallic machine like the plaintiff's; hence it must be admitted that the plaintiff was the inventor, and he humbly conceived his lordship would think that the plaintiff had made out his claim to a very useful invention.

Blenman, on the same side, said that the plaintiff did not allege against Sir William that he was selling the machines, but that he was supplying His Majesty's navy with them, to the prejudice of the plaintiff, who would otherwise be applied to by the Ordnance for his barrels. [The LORD CHANCELLOR. The plaintiff's bill alleges that the defendant was making the machines, and in the affidavit it was stated that he had supplied a vessel belonging to the East India Company with them, which amounted to a sale.] *Blenman* continued, and went over the arguments of Mr. Leach, contending that his criterion of an invention that deserved protection from the Statute of Monopolies was not just. The discovery of a new principle was not necessary to make out an invention, otherwise the application of a piece of loadstone to the needle that guided mariners in their voyages did not deserve the name of an invention, because the properties of the loadstone were previously known.

Neither was it necessary that all the parts of the machine should be original, otherwise telescopes were not an invention, because the different glasses taken separately were formerly known. He then urged that the case now attempted to be made out by the defendant, that the invention was not new, had not succeeded. The conduct of the defendant would show this. He had been called on by government to report on Walker's patent barrels, and he had made three reports ; two of them were dated 1810, and the last was dated August, 1811. In these reports Sir William Congreve had stated that the metal barrels of the patent were not suited to preserve gunpowder for the service of the Royal Navy ; that one had been made in 1791 in the Royal Laboratory more suitable for the purpose. The report also stated that the barrel made in 1791 was very different to Walker's and much better ; and now it was attempted by the defendant to be said that Walker's invention was not new because of this barrel being made in 1791. The reports also stated that the idea of packing cartridges in metal barrels, suggested in the specification, would prove impracticable. The reports argued that the hooped barrels of wood were better suited for the purpose. He contended that nothing could be more clear than that the reports proved the whole of the plaintiff's case. If the metal barrels of the patent were so useless and objectionable as the defendant in his reports had attempted to make them appear, why had they not brought that of 1791 into use, why had the government abandoned the use of their barrels of hooped wood, and engaged the defendant in making metal barrels, substantially the same as the patented ones ? The plaintiff's invention must now be acknowledged to be new : had the defendant considered metal barrels not to be new when he made his reports, he would have told the government that it was already the property of the public, and that they need not pay Mr. Walker for its use. The navy are now supplied with these machines ; and by their use, the whole system of preserving powder on board His Majesty's ships was altered, and this had been brought about by Mr. Walker, not by what they had done in the Royal

Laboratory in 1791. In 1810 and 1811 the comptroller of the Royal Laboratory, the defendant, had declared the plan of the plaintiff's barrels to be impracticable; but now it is contended by the defendant that it had been in practice for twenty-five years, but, strange to say, the barrels were shown not to have been distributed in the navy till 1814, four years after the patent of the plaintiff. [The Lord Chancellor requested to see the barrel of the plaintiff's patent, and also that complained of as being made by the defendant in violation of the injunction and of the patent. He wished to know in what the piracy was alleged to consist. His lordship said, the question is whether the barrel of the defendant may be considered as a metallic barrel enclosed in one of wood, or merely as a wooden barrel lined with a coating of lead, in the manner of a tea-chest. If the lead be considered as constituting a separate vessel, capable of being detached from the wood, there may be some reason to conclude it an imitation of the patent.] The lead constitutes a separate machine, and the defendant has ordered some to be constructed of a stronger metal, copper, which assimilates the barrels still more. [The LORD CHANCELLOR. Will the government have any objection to keep an account of the barrels made, till a trial be had to ascertain the question of infringement and the validity of the patent? The public service may thus proceed without interruption, and the plaintiff will have security for his profits should the decision be in his favor.] *Leach*. There will be no objection to such an arrangement.

Lord Chancellor ELDON. There has been an *ex parte* injunction granted in this case, and I think I ought not to have granted it before hearing the other side. Had I read the bill and affidavit with strict attention, I think I should not have granted the injunction. I would wish to speak with all respect that I ought of Sir William Congreve, in his official and individual character, but I must tell him what I would tell any other man who is brought as a suitor into this court, that he must not disobey its orders. He might have moved to dissolve its injunction, but he could

claim no right to infringe it. I confess, upon an examination of the two barrels, that I see so much similarity between them that were the defendant's barrel of copper, instead of lead as it is, it would amount to a violation of the injunction and of the patent ; the question is one for a jury. Speaking with all respect, I will treat government here as I would any suitor of the court. Let an account be kept of all machines made in alleged violation of the plaintiff's patent, subject to the profits to which the plaintiff will be entitled, if the patent has been infringed. I thus secure to Mr. Walker all that he can wish or all that he is entitled to obtain. In the mean time let the injunction be dissolved, and let the defendant proceed in supplying the demands of the public service, subject only to account at the instance of the plaintiff, on the trial of the legal issue. I would recommend to government to pay the costs of the present applications, as there are grounds for believing the injunction violated. I can only recommend to government, but I would have it understood that if the recommendation is not attended to, I will make an order for the defendant, Sir William Congreve, to pay them.

Injunction dissolved.

NEWBERY *v.* JAMES.

Chancery, March 27, 1817.

Injunction. Enforcing Agreement to keep a Secret.

Equity cannot decree specific performance of an agreement not to reveal the composition of a medicine, nor enjoin the promisor in such an agreement from revealing the secret.

Motion to dissolve a preliminary injunction.

The bill was filed for specific performance of an agreement entered into by Dr. R. James and the plaintiff's late father. The parties agreed that Dr. James, having invented certain pills for the cure of the gout, etc., and also certain powders for the cure of fever, etc., that Dr. James, for the

considerations mentioned, should for the term of twenty-one years make and sell the pills and powders, at the prices set forth, to Newbery, and that he should not sell to any other person (excepting that he might send them to his own patients); it was also agreed that Dr. James should instruct Mr. Newbery as to the mode of making, so that the secret should not be lost, but that Newbery was not to make the medicine so long as Dr. James continued the supply. The bill then set forth a deed made on this agreement, and that letters patent were taken by Dr. James for the powder, and one half assigned to Newbery. The bill also set forth another deed of 1775, by which the term was extended to an indefinite period. The patent expired in 1761. Mr. Newbery died, and by his will left all his interest to his son, the plaintiff. Dr. James died in 1776, and left to his son, R. H. James, all his right in the secrets. Mr. R. H. James, after his father's death, continued to make and supply the plaintiff according to the terms of the deed of 1755 and of the original agreement, until his death in 1801, when by his will he gave to his executors the management of the concern, till his son, the defendant, attained the age of twenty-four; and the will directed that the medicines should be delivered, as before, to the plaintiff. The bill set forth that the defendant and the executors had threatened to communicate the secrets of preparing the medicines, and prayed that the sale should be to none other but the plaintiff, and for an injunction to restrain the defendants from parting with the medicines or the secrets to others, and that they be required to be bound to the plaintiff. On this bill an *ex parte* injunction was obtained, and the defendants in their answer set forth various acts done by the plaintiff, to show that he had abandoned the rights under the deeds and wills, and the defendants contended that they had a right to do what they pleased with the secrets and the medicines produced according thereto.

Lord Chancellor ELDON said that the difficulty in such a case was how to decree the specific performance of the agreement. Either it was a secret or it was none. If a

secret, what means did the court possess of interfering so as to enforce its own orders? If none, there was no ground for interfering. The injunction being already granted *ex parte* afforded no reason for its continuance, even though the answer had not materially varied the case made by the bill, it being granted without prejudice to any question that might be made in the cause. In this case, the medicines in question were the subject of a patent which had expired; and the agreement which the bill sought to enforce was an agreement by which, independently of the patent, the proprietors had entered into covenants not to sell that which was the subject of the patent except to each other. But in order to support a patent, the specification should be so clear as to enable all the world to use the invention as soon as the term for which it had been granted was at an end. Then, with regard to the analeptic pills, for which no patent had been procured, if the art and method of preparing them were a secret, what signified an injunction, the court possessing no means of determining on any occasion whether it had or had not been violated? This court could do nothing but put parties in a way to try their legal rights by an action. This was the utmost extent to which it would go, and he would not even order the injunction to be continued in the mean time till an action should be tried. The only way by which a specific performance could be effected would be by a perpetual injunction; but this would be of no avail unless a disclosure were made to enable the court to ascertain whether it was or was not infringed; for if a party comes here to complain of a breach of injunction, it is incumbent on him first to show that the injunction has been violated.

His lordship concluded by saying that he thought he ought not to continue the injunction; and that, if he did not mention the case again, his opinion must be considered to be that the injunction must be dissolved, the defendants to keep an account of what they sell, and the court to give the parties the means of trying their rights in an action, by removing out of the way the difficulty arising from the circumstance of the plaintiff being one of Dr. James's executors.

HILL v. THOMPSON.

Chancery, April 24, 1817.

Oath to Bill for Injunction. Necessity for Establishing Right at Law.

In order to obtain an injunction against violation of the patent, the party must, at the time of appearing, swear as to his belief that he is the original inventor. Where there has been a length of exclusive enjoyment under a patent, the court will grant an injunction in the first instance without previously putting the party to establish his right by an action at law. Otherwise when the patent is recent.

Motion to dissolve an injunction against infringement.

The bill prayed an injunction to restrain the defendants "from selling or in any manner disposing of any iron smelted and worked or otherwise produced by them, or by any person or persons on their behalf, by the means or use of the plaintiff's invention and improvements (in the bill mentioned); and from using slags or cinders and mine rubbish and lime, according to the plaintiff's said invention and improvements; and from in any manner using the said invention and improvements in the smelting and working of iron, and from otherwise infringing the plaintiff's patent (in the bill also mentioned) during the remainder of the term thereby granted."

The specification was as follows:

"My said improvements do consist in the manipulations, processes and means hereinafter described and set forth, and by which the iron contained in the several sorts of slags or cinders produced in or obtained from the refinery furnace, the puddling furnace, and the balling or reheating furnace, and which are produced in consequence of, or by, or during the operations of rolling, or by any treatment to which the crude or pig iron of the blast furnace may be or is usually subjected, in order to improve or alter the quality of the same, is by smelting and working made into or brought into the state of bar iron, whether only one of the said several sorts of slags or cinders be used, or whether all the said

sorts of the said slags or cinders, or any of the said several sorts of them, be mixed together and used, or whether all the said sorts of the said slags or cinders, or any one or more of the said sorts of them, be compounded with iron stones or iron ores, or with both of them, whether all the said several compounds be used together or whether only one or more of the said several compounds be used, or whether only one of the several sorts of crude or pig iron, obtained from the said slags or cinders, or the aforesaid mixtures of them, be used, or whether all or any of the said several sorts of crude or pig iron be mixed and used together, or whether they or any one or more of them be mixed with one or more sort or sorts of any other crude or pig iron, and used, or whether only one of the several sorts of crude or pig iron obtained from all or any or either of the said compounds of the said slags or cinders with iron stones or ores be used, or whether all or any of the said last-mentioned several sorts of crude or pig iron be mixed and used together, or whether they or any one or more of them be mixed with any one or more sort or sorts of any other crude or pig iron, and used, or whether all or any or either of the aforesaid sorts of crude or pig iron be compounded and used with refined metal, obtained from the said slags or cinders, or from the said mixtures thereof, or from the said compounds of the said slags or cinders with iron stones and ores, or with the refined metal of any other iron, or whether only one of the several sorts of refined metal, obtained from the said slags or cinders, or from the said mixtures thereof, or from the said last-mentioned compounds, be used, or whether all or any of the said last-mentioned refined metals be mixed and used together, or whether they or any one or more of them be mixed with any one or more sort or sorts of refined metal of any other iron, and used, or whether only one of the several sorts of puddled iron, obtained from the said slags or cinders, or from the said mixtures thereof, or from the said last-mentioned compounds, be used, or whether all or any of the said last-mentioned puddled irons be mixed and used together, or whether they or any one or more of

them be mixed with any one or more sort or sorts of any other puddled iron, and used ; and that my said improvements do further consist in the use and application of lime to iron subsequently to the operations of the blast furnace, whereby that quality in iron, from which the iron is called ' cold short,' howsoever and from whatever substance such iron be obtained, is sufficiently prevented or remedied, and by which such iron is rendered more tough when cold. And I do further declare that in the said smelting and working I do use a mixture of lime or limestone, and of the substance in which the iron stones are generally found, and which is known in South Wales by the name of mine rubbish, whether raw or calcined, consisting by weight of about six parts of good limestone to five parts of raw mine rubbish, which said mixture I do apply, together with the other materials operated upon, in the blast furnace, for the purpose of producing a fusible cinder, and that the proportions of the said limestone and mine rubbish composing the said mixture may be varied without materially impairing the beneficial effects thereof. And that in smelting and working by the usual working of the blast furnace, all or any or either of the said sorts of the said slags or cinders, or the aforesaid mixtures of them, or all or any or either of the said compounds thereof with iron stones or ores, when such slags, or cinders, or compounds last mentioned are known, by assay or otherwise, to be capable of affording crude or pig iron to the amount of fifty per cent. or thereabouts, by weight, I do, in order to make one charge, take and use eighteen cubic feet by measure, or about four hundred and fifty pounds by weight, of coke, and from three hundred pounds to four hundred and twenty pounds of the said slags or cinders, or the said last-mentioned mixtures or compounds, and from seventy pounds to ninety-five pounds of the said raw mine rubbish, and from one hundred and eighty pounds to two hundred and forty pounds of the said limestone, or from one hundred and ten pounds to one hundred and forty-five pounds of lime, which charge I do repeat according to the usual manner of filling and working the blast furnace. But that when the said slags or cinders,

or the said last-mentioned mixtures or compounds, which are known, by assay or otherwise, to contain respectively either more or less than fifty per cent. by weight of crude or pig iron, are required to be smelted and worked by the usual working of the blast furnace, it will be necessary, in order to produce the best effect, that the quantity and proportions thereof, and of the limestone and raw mine rubbish to be made use of in the charge as aforesaid, should be varied, and that, as a general rule of practice to be adopted and followed, I declare that I do mix all or any or either of the said sorts of the said slags or cinders with raw mine rubbish, if required, or I do mix all or any or either of the said last-mentioned compounds with raw mine rubbish, if required, until the crude or pig iron contained in either of such aggregate mixtures shall amount to about forty per cent. or less than forty per cent. if so wished, and then in order to constitute a charge, I do take from either or both of such aggregate mixtures from three hundred and fifty pounds to five hundred and fifty pounds in the whole, and eighteen cubic feet by measure, or about four hundred and fifty pounds by weight of coke, and I do flux the whole by adding six parts by weight of limestone for every five of such parts of the raw mine rubbish as may have been used for the purpose last before mentioned, and I do add so much more lime or limestone as may be known, by assay or otherwise, to be required to produce a fusible cinder. And further, that it will be advisable to reduce the said slags or cinders, or the said mixtures of the said slags or cinders, or the said compounds of the said slags or cinders, with the said iron stones and ores, and the limestone and raw mine rubbish aforesaid previous to their being put into the blast furnace, to about the size at which materials are commonly used in the blast furnace. And further I do draw off from the blast furnace the crude or pig iron afforded by the said slags or cinders, or by the said last-mentioned mixtures or compounds, and I do make the several sorts of crude or pig iron obtained from the said slags or cinders, or from the said last-mentioned mixtures or compounds, into bar iron, by puddling, reheating, and rolling, compressing, or ham-

mering, or by refining, puddling, reheating, and rolling, compressing, or hammering, whether only one of the said several sorts of crude or pig iron be used, or whether all or any of the said several sorts of crude or pig iron be mixed and used together, or whether they or any one or more of them be mixed with any one or more sort or sorts of any other crude or pig iron, and used, or whether all or any or either of the aforesaid sorts of crude or pig iron be compounded and used with refined metal obtained from the said slags or cinders, or from the said mixtures thereof, or from the said compounds of the said slags or cinders, with iron stones or ores, or with the refined metal of any other iron, and used, or whether only one of the several sorts of refined metal obtained from the said slags or cinders, or from the said mixtures thereof, or from the said last-mentioned compounds, be used, or whether all or any of the said last-mentioned refined metals be mixed and used together, or whether they or any one or more of them be mixed with any one or more sort or sorts of refined metal from any other iron, and used, or whether only one of the several sorts of puddled iron, obtained from the said slags or cinders, or from the said mixtures thereof, or from the said last-mentioned compounds, be used, or whether all or any of the said last-mentioned puddled irons be mixed and used together, or whether they or any one or more of them be mixed with any one or more sort or sorts of any other puddled iron, and used. And I do further declare that I have discovered that the addition of lime or limestone, or other substances consisting chiefly of lime, and free or nearly free from any ingredient known to be hurtful to the quality of iron, will sufficiently prevent or remedy that quality in iron from which the iron is called 'cold short,' and will render such iron more tough when cold, and I do for this purpose if the iron, howsoever and from whatever substance the same may have been obtained, be expected to prove cold short, add a portion of lime or limestone, or of the other said substances, of which the quantity must be regulated by the quality of the iron to be operated upon, and by the quality of the iron wished to be produced. And further,

that the said lime or limestone, or other aforesaid substances, may be added to the iron at any time subsequently to the reduction thereof in the blast furnace, and prior to the iron becoming clotted or coming into nature, whether the same be added to the iron while it is in the refining furnace or in the puddling furnace, or in both of them, or previous to the said iron being put into either of the said furnaces. And further, that I do in preference add quicklime instead of limestone or the said other substances (either of which as to quantity, whensoever and howsoever so used, may be considerably varied) to the iron in the refinery furnace and in the puddling furnace. And I do further declare that I do greatly prefer to mix or add, in the refinery furnace, about from one fourth to one third by weight of the crude or pig iron, which has been obtained from the slags or cinders, with three fourths or two thirds of the crude or pig iron which has been obtained from the iron stones. And I do further declare that for the operation in the refinery furnace I do add the lime as it is obtained from the kiln, in the proportion of from one sixtieth to one fortieth part by weight of the whole weight of the crude or pig iron intended to be worked in the furnace, and I apply about one half of the said lime together with the crude or pig iron as it is thrown upon the refinery fire, and the remainder from time to time during the course of the refinery operation, taking care not to suffer the slag or cinder which is produced to get too thick, nor to endanger the stopping up of the furnace. And I do also declare that in the puddling furnace I further add lime in the proportion of from one hundredth part to one eightieth part by weight of the whole weight of the iron in the furnace, which lime I previously slake and wet to prevent its being carried off by the draft of the furnace, and I do apply the same in the course of that part of the operation which is known to workmen by the term drying the iron, and, moreover, I take care that the same shall be intimately mixed with and minutely dispersed through the iron by the usual operations of puddling."

Upon the filing of the bill the plaintiffs obtained an in-

junction, which the defendants now, upon the coming in of their answer, moved to dissolve. Affidavits were produced upon both sides, tending respectively to impeach and to assert the validity of the patent and the propriety of the injunction to restrain the infringement. An affidavit made by the plaintiff referred to the specification of his invention lodged in the Patent Office, alleging that he verily believed he was the inventor of the several improvements in smelting and working iron which were therein mentioned; and the specification referred to contained an explanation of the principles of the alleged invention, which was extremely diffuse, and objected to on the other side as wholly unintelligible or so confused and intricate as not to be capable of being reduced to practice. It was further objected that, except by reference to this obscure specification, neither the plaintiff nor any of his witnesses had stated in what the alleged invention and improvement consisted, nor whether he claimed in respect of invention or of improvements merely; and that a patent to be good must not be more extensive than the invention. The defendants' affidavit also went to deny the originality of the invention altogether. *Rex v. Else* (*ante*, p. 40), *Boulton v. Bull* (*ante*, p. 59), *Hornblower v. Boulton* (*ante*, p. 98), and *Harmer v. Plane* (*ante*, p. 166) were cited on the part of the plaintiff in answer to the objection of the specification.

The case was argued on several occasions and at considerable length.

Romilly, *Bell* and *Phillimore*, for the defendants, in support of the motion to dissolve the injunction.

Trower, *Wetherell* and *Raithby* in opposition.

Lord Chancellor ELDON said he doubted whether the injunction ought to have been granted in the first instance, unless the affidavits had stated more particularly in what the alleged infringement of the patent consisted, and that it should have been shown to be by working in the precise proportions mentioned in the specification, as being of the essence of the invention. That when, in future, an injunction is applied for *ex parte* on the ground of violation of a

right to an invention secured by patent, it must be understood that it is incumbent on the party making the application to swear at the time of making it as to his belief that he is the original inventor; for although when he obtained his patent he might very honestly have sworn as to his belief of such being the fact, yet circumstances may have subsequently intervened, or information been communicated, sufficient to convince him that it was not his own original invention, and that he was under a mistake when he made his previous declaration to that effect.

The principle upon which the court acts in cases of this description is the following: Where a patent has been granted, and an exclusive possession of some duration under it, the court will interpose its injunction, without putting the party previously to establish the validity of his patent by an action at law. But where the patent is but of yesterday, and, upon an application being made for an injunction, it is endeavored to be shown in opposition to it that there is no good specification, or otherwise that the patent ought not to have been granted, the court will not, from its own notions respecting the matter in dispute, act upon the presumed validity or invalidity of the patent, without the right having been ascertained by a previous trial, but will send the patentee to law, and oblige him to establish the validity of his patent in a court of law, before it will grant him the benefit of an injunction.

In the present case, I shall say nothing as to my opinion of the validity or invalidity of the patent. The affidavits in support of the injunction represent that the defendants have made iron in the way mentioned in the specification. But whether it is to be considered as a patent for extracting iron from slags or cinders, by working and smelting, and by the admixture of certain materials to reduce the percentage to forty per cent., or for mixing cinders, limestone and mine rubbish, in certain proportions, it should, before any injunction was granted, have been pointed out that the patent was actually infringed by so mixing the ingredients or so reducing the percentage. Here I cannot but entertain a doubt whether the improvement as to the lime destroying

the "cold short" is or is not a new invention, but that is not for me to decide; and if on the trial of an action the witnesses should prove the use of lime for the same purpose previously to the grant of this patent, still another question will remain, admitting that a patent may be good for a mere method of producing a more beneficial and effectual result, from the adhibition of the same materials.

But it is enough in the present case to resort to the principle already laid down, and which is the same that governed the cases which have been cited,—of *Harmer v. Playne* (*ante*, p. 171) and *Boulton v. Bull* (*ante*, p. 59),—because it cannot be said that there has been in this case such a possession or enjoyment under the patent as would induce the court to continue the injunction upon such evidence as is here afforded, until its validity has been tried at law. Here the patent bears date July, 1814, and the specification, January, 1815; and it appears by the affidavits that the works were not completed so as to carry on the operations under the patent until July, 1816.

His lordship accordingly dissolved the injunction, but directed that an account should be kept of slags used and iron made by the defendants, according to the method described in the specification, the plaintiff undertaking to bring an action, with liberty to apply to have the injunction revived after trial of the action, or in case of any unreasonable delay being interposed on the part of the defendants.

HILL v. THOMPSON.

Common Pleas, N. P., Mich. Vac., 1817.

Novelty. Question of Fact.

The novelty of the invention or improvement,—*Held*, a question for the jury.

Trial of an action for infringement.

The action was brought for trial at law to establish the validity of the patent granted to Anthony Hill, dated July

26, 54 Geo. III., for improvements in smelting and working of iron.

The specification is set out in the last preceding case.

Upon the trial, the plaintiff's clerk testified in his behalf that bar iron had been manufactured from slags, according to the specification, in considerable quantities; that previous to the patent slags had been rejected as useless at iron manufactories, attempts to convert them to advantage having failed; that mine rubbish, the matrix of the iron ore, had never before been mingled with slags for the purpose of producing bar iron; that in order to prevent the state of bar iron called "cold short" the lime, etc., had been used in the proportions specified, though those proportions had been sometimes a little varied, but that the proportions specified were essential to the most successful result; and that the exact proportions of cinders or slags and iron stone specified had not invariably been attended to in working under the patent. Three other witnesses, who had been acquainted with the manufacturing of iron from twenty to thirty years, corroborated the clerk as to the uselessness and rejection of slags before the patent, and proved their ignorance that lime was ever before used in the processes of puddling and refining for the prevention of the state of "cold short," and the novelty to them of the specified modes for converting the slags into bar iron, and preventing the state of "cold short;" and David Mushet, who had superintended iron manufactories for twenty-five years, and had studied and written on the subject, corroborated the witnesses as to the former uselessness of slags, and gave his opinion that if lime were applied as directed in the specification, it would be an effectual prevention of the state of "cold short," and that the application as specified was entirely new, and the specification perfectly intelligible; observing that the plaintiff's invention consisted, not in the discovery of new ingredients or new principles, but in a combination of ingredients and principles never existing so combined before.

To prove the infringement, Edward Forman, the son of one of the defendants and the superintendent of their works,

was called, and stated that he had seen the plaintiff's specification ; that since the date of the patent the defendants preserved cinders, which they had not done before, and produced pig iron, by mixing them with mine rubbish ; and that in the subsequent processes they applied quicklime, to prevent the iron from being " cold short." But he stated that the defendants did not work by the plaintiff's specification, but used very different proportions, viz., lime in the refinery furnace in about the proportion of a one hundred and twentieth part to the whole charge of pig iron, and that they used none in the puddling furnace, and that the defendants had used slags in the puddling furnace for years before the date of the patent. He also proved that the proportions of mine rubbish, as laid down in the specification, were not essential to the success of the process ; that the defendants had been in the habit of varying those proportions, and that they once entirely omitted mine rubbish, when the result was most successful.

For the defendants it was proved that at Bradley Iron Works, in Staffordshire, more than forty years ago (iron stone at that time running short), slags and mine rubbish were collected and purchased, and used in the blast furnace, and that coke, mine rubbish, Lancashire or Cumberland ore, limestone and puckstone were used to convert the slags into pig iron, which, after certain processes, was converted into good bar iron. It was also proved that, at Benthall Iron Works, in Staffordshire, as far back as the year 1788, the slags from the refinery furnace, together with coke, iron stone, limestone and poor robin, were used in the blast furnace for the production of pig iron, which was afterward converted into good bar iron ; and that at Bingley, in Staffordshire, many years ago, slags had been used in the same way, and with the same results. .

A witness, named Northall, proved that slags had been used at Millfield Works, in Staffordshire, together with coke, iron stone and lime, in the blast furnace, in 1803, and that he then knew how to correct the state of " cold short" in iron produced from the slags by the application of lime in the puddling furnace, and that these works were in con-

sequence without a forge, which would otherwise have been necessary to prevent the iron from being "cold short." Thomas Robinson, a manager of Ketley Works, Staffordshire, from 1803 to 1816, produced a journal of experiments commenced by him at those works in 1807, with a view to the prevention of "cold short." At that time limestone was there used in the refinery furnace, not with the view of curing the "cold short," but the use of it was found to make the iron more tough. He used limestone in the refinery furnace to black hard pig iron (which generally affords a slag in the refinery furnace inferior to that afforded by other pig iron, and generally produces "cold short" iron), and the limestone made the slags from these pigs as good as the slag produced from good pig iron, without the aid of limestone.

From 1807 to 1809 he used quicklime, and afterward, up to 1816, lime-wash upon coke, in the proportion of about twenty pounds of lime to ten cwt. of pig iron. This made the iron, which would otherwise have been "cold short," tough. He tried lime in the puddling furnace, in order to obtain the same advantage, and he obtained the advantage, though the apparatus was spoiled; but he would have continued to use limestone in the puddling furnace had he not preferred its use in the refinery furnace. He did not treat iron obtained from slags with lime according to that process, but used another.

For the defendants it was urged that there was no novelty in the alleged invention, and that the mere regulation of principles before known and practised was insufficient to support the patent, which was too general; that the specification was equivocal and ambiguous, and that the plaintiff had taken out his patent for too much, and had not even confined himself to the particular proportions of the various ingredients, the proportioned combination of which alone constituted his alleged discovery.

DALLAS, J., left it to the jury to say whether the plaintiff had made out the novelty of the invention or improvement for which the patent was taken out; namely, the conver-

sion of slags into good bar iron, and the prevention of the quality called "cold short" by the application of lime.

Verdict for the plaintiff

REX v. METCALF.

King's Bench, N. P., after Mich. T., 1817.

Sufficiency of Specification. "Tapering."

The word "tapering" is not correctly used in a specification to describe a brush the peculiarity of which is that the bristles are of unequal length.

Scire facias to repeal patent.

The patent in question had been obtained by the defendant for the manufacture of hair brushes under what were described in the specification as "tapering" brushes.

The specification was as follows :

"I take any wood, of the thickness of half an inch or three eighths of an inch, or thereabouts, and bore it with a brush bit, run in a lathe of any size, shape or pattern ; I then plane it smooth, which forms the stock of my brush ; I then cut hair in lengths, about one inch and a quarter long, which I mix with my hands by shaking it together as unevenly as possible ; I then take brass wire, which I double, and push through the hole at the back of the stock, which forms a loop into which I put so much of the hair so mixed as aforesaid as will fill the hole of the stock and draw it into such hole, and so proceed, hole by hole, till I have drawn the whole stock ; I then press down with a piece of iron the wire at the back of the stock and glue on the back of the stock a thin cover of wood ; when dry I proceed to complete my brush according to my designed pattern, by sawing off, with a turning saw, all superfluous parts of the stock, and by shaving off with a spokeshave, and scraping

with a scraper, the rough and uneven parts of the stock, and smooth such stock by rubbing it with glass-paper."

It thus appeared that the mode of manufacturing the patent brushes differed from the common mode chiefly in this respect, that the specification directed that the hair or bristles were to be taken of the length of an inch and a quarter, and before their insertion in the holes in the stock of the brush were to be mixed up together; so that when they were collected and drawn through the holes, and secured by a brass wire, the bristles would be of unequal lengths; whereas, according to the usual mode, the bristles were to be inserted in the stock, so as to be as nearly of the same length as possible, and were afterward cut down, so as to be of the same length.

LORD ELLENBOROUGH. "Tapering" means gradually converging to a point. According to the specification, the bristles would be of unequal length, but there would be no tapering to a point, which the description assumes.

Scarlett, for the defendant, stated that by compressing the bristles in each tuft of hairs, the effect would be to make them converge to a point; and he suggested that the brushes were known by this description in the trade.

LORD ELLENBOROUGH. If the word "tapering" be used in its general sense, the description is defective: there is no converging to a point. If the term has had a different meaning annexed to it by the usage of trade, it may be received in its perverted sense. At present, however, I cannot hold out any prospect that the difficulty arising from the grammatical consideration can be removed.

LORD ELLENBOROUGH, after some further evidence had been gone into, which did not remove the difficulty, advised the jury to find that it was not a tapering, but only an unequal brush.

Verdict for the Crown.'

' In the ensuing term a motion was made by the defendant for a new trial, but the court refused a rule *nisi* upon the ground of the objection made at the trial.

HILL v. THOMPSON.

Chancery, Dec. 15, 1817.

Sufficiency of Specification. Necessity for Establishing Right at Law before Injunction.

An injunction having been dissolved, with leave to the plaintiff in the suit to bring an action to establish his patent, the defendant to keep an account of profits meanwhile, and the verdict sustaining the patent having been rendered at law, the plaintiff now moved to revive the injunction, whereupon the defendants intended to move for a new trial of the action at law. *Held*, that this application should stand over until the result of the application for a new trial should be known, and that in the mean time the defendants' accounts should continue to be taken.

To establish the validity of a patent, the invention must be both new and useful, and the specification must accurately describe it.

An attempt in a specification to cover more than is actually new and useful vitiates the patent, rendering it ineffectual even to the extent to which it might otherwise have been supported.

Motion to revive an injunction.

After the injunction in this case was conditionally dissolved, as reported in the preceding case, an action at law was brought and tried, resulting in a verdict sustaining the patent, whereupon the plaintiff now moved to revive the injunction.

In support of the motion it was represented to be clearly settled at law that there may be sufficient novelty to support an injunction as well in a mere improvement upon an old method as in an original invention. The verdict of the jury was also stated to be conclusive as to the matter of fact and the application now made as of course, and such as the court could not refuse without taking upon itself to meddle with what was the exclusive province of a court of law.

On the other hand, it was stated to be the intention of the defendants to move for a new trial at law, which could not be done before the next term, but that the motion would then certainly be made, and with every prospect of success, on the ground of the verdict being pronounced

against evidence ; it having been clearly proved on the trial that, previously to the grant of this patent, iron had been extracted from slags or cinders by precisely the same process as that described in the specification. That the trial was at Nisi Prius, where little opportunity is afforded for that consideration on the part of the judge which, in such a case as the present, was necessary to enable him properly to direct a jury. That the order giving liberty to the plaintiff to apply to the court to revive the injunction left it at the discretion of the court to grant or to refuse the application ; and that, in the present case, its being revived would be attended with the greatest inconvenience and loss to the parties in case, by the event of a new trial, they should be found to have a right to continue the works which had been commenced by them in consequence of the patent being ultimately pronounced to be invalid. That the verdict itself could not be considered as in any respect final or complete till it were known whether it should stand, or abide the event of a new trial. That in the direction of the judge to the jury it was expressly stated that the patent was for the invention of certain improvements in the smelting and working of iron obtained from slags or cinders, and it therefore was a point still to be proved, if the contract were insisted on, that the same thing had never been effectually accomplished before ; whereas there was abundance of evidence that the very same thing had been habitually practised in Staffordshire and Shropshire, although it might be true that it had not been resorted to in South Wales, where the works in question were situated.

To all this it was replied that the injunction must be revived as a matter of course, the verdict having been obtained ; and that to oppose it was, in effect, no other than to apply for a new trial to a court incompetent to award it. That, in the opinion of the judge who directed the verdict, it was clearly a patent for an improvement and not for an original invention ; and that the verdict pronounced agreeably to that direction gave a *prima facie* right to the plaintiff, upon which the court could not refuse to act.

Lord ELDON. In this case, the injunction was first granted upon the strength of affidavits, which were contradicted, as to their general effect, in the most material points, when it afterward came before the court upon a motion to dissolve the injunction so obtained. Many topics were then urged on both sides, and fully discussed in argument. It was insisted on the part of the plaintiff, and the court agreed to that position, that where a person has obtained a patent, and had an exclusive enjoyment under it, the court will give so much credit to his apparent right as to interpose immediately by injunction to restrain the invasion of it, and continue that interposition until the apparent right has been displaced. On the other hand, it was with equal truth stated that, if a person takes out a patent as for an invention, and is unable to support it, except upon the ground of some alleged improvement in the mode of applying that which was previously in use, and it so becomes a serious question both in point of law and of fact whether the patent is not altogether invalid ; then, upon an application to this court for what may be called the extra relief which it affords on a clear *prima facie* case, the court will use its discretion ; and if it sees sufficient ground of doubt, will either dissolve the injunction absolutely, or direct an issue, or direct the party applying to bring his action ; after the trial of which, either he may apply to revive, if successful, or else the other party may come before the court, and say, I have displaced all his pretensions, and am entitled to have my costs and the expenses I have sustained by being brought here upon an allegation of right which cannot be supported. And as in this instance the court will sometimes add to its more general directions that the party against whom the application is made shall keep an account pending the discontinuance of the injunction, in order that, if it shall finally turn out that the plaintiff has a right to the protection he seeks, amends may be made for the injury occasioned by the resistance to his just demands.

In his directions to the jury, the judge has stated it as the law on the subject of patents, first, that the invention must be novel ; secondly, that it must be useful ; and

thirdly, that the specification must be intelligible. I will go farther, and say that not only must the invention be novel and useful and the specification intelligible, but also that the specification must not attempt to cover more than that which, being both matter of actual discovery and of useful discovery, is the only proper subject for the protection of a patent. And I am compelled to add that if a patentee seeks by his specification any more than he is strictly entitled to, his patent is thereby rendered ineffectual, even to the extent to which he would be otherwise fairly entitled. On the other hand, there may be a valid patent for a new combination of materials previously in use for the same purpose, or for a new method of applying such materials. But in order to its being effectual, the specification must clearly express that it is in respect of such new combination or application, and of that only, and not lay claim to the merit of original invention in the use of the materials. If there be a patent both for a machine and for an improvement in the use of it, and it cannot be supported for the machine, although it might for the improvement merely, it is good for nothing altogether, on account of its attempting to cover too much.

Now it is contended that what is claimed by the present patent is not a novel invention ; that the extraction of iron from slags or cinders was previously known and practised ; that the use of lime in obstructing " cold short " was likewise known. But to all this it is answered that the patent is not for the invention of these things, but for such an application of them as is described in the specification. Now, the utility of the discovery, the intelligibility of the description, etc., are all of them matters of fact proper for a jury. But whether or not the patent is defective in attempting to cover too much is a question of law, and as such to be considered in all ways that it is convenient for the purposes of justice that it should be considered. This specification generally describes the patent to be " for improvements in the smelting and working of iron ; " and it then goes on to describe the particulars in which the alleged improvements consist, describing various proportions in the combination

of the materials, and various processes in the adhibition of them. The question of law upon the whole matter is whether this is a specification by which the patentee claims the benefit of the actual discovery of lime as a preventive of "cold short," or whether he claims no more than the invention of that precise combination and those peculiar processes which are described in the specification. And when I see that this question clearly arises, the only other question which remains is whether I can be so well satisfied with respect to it as to take it for granted that no argument can prevail upon a court of law to let that first question be reconsidered by granting the motion for a new trial. If this be a question of law, I can have no right whatever to take its decision out of the jurisdiction of a court of law, unless I am convinced that a court of law must and will consider the verdict of the jury as final and conclusive. But this only brings it back to the original question; and I see enough of difficulty and uncertainty in the specification, and enough of apparent repugnance between the specification and the patent itself, to say that it is impossible I can arrive at such a conclusion respecting it as to be satisfied that there is no ground for granting a new trial. In the order I formerly pronounced was contained a direction that the defendants should keep an account of iron produced by their working in the manner described in the injunction. If the injunction is to be now revived, the whole of their establishment must be discharged between this and the fourth day of next term, when it is intended to move for a new trial, the result of which may be that the defendants have a right to continue the works; to do which, they will then be under the necessity of recommencing all their operations, and making all their preparations and arrangements *de novo*. It appears to me that this would be a much greater inconvenience than any that can result from my refusal in the present instance to revive the injunction. My opinion, therefore, is that this matter must stand over until the fifth day of next term, when I may be informed of the result of the intended application for a new trial; the account to be taken in the mean time as before.

HILL v. THOMPSON.

Common Pleas, Trin. T., 1818.

*Effect of Verdict for Plaintiff in Suit for Infringement.
What constitutes an Infringement. Communication and
Use of Invention. Specification of Improvement.*

General verdict for the plaintiff in suit for infringement affirms the validity of the patent and the fact of infringement.

A slight departure from the specification made for the purpose of evading it constitutes an infringement.

Knowledge of an invention must be communicated, or made use of, in order to complete a discovery.

If the invention be an improvement, it must distinctly appear on the face of the specification to be claimed as such.

If any material part of the alleged discovery fail, the patent is void.

Rule to set aside verdict and enter a nonsuit or have a new trial.

The trial is reported in the preceding cases, pp. 285, 293, where also the specification is set out. The grounds for the present motion were, 1, those urged at the trial; 2, because the verdict was against evidence, inasmuch as it had been proved that lime had been applied to the prevention of the quality called "cold short," and that good bar iron had been produced from slags and mine rubbish long before the patent,—citing Aikin's "Chemical and Mineralogical Dictionary" to show that the application of lime for the cure of the quality called "cold short" was notorious at a much earlier date.

The court granted the rule principally on the question whether this was substantially a patent for a discovery or an improvement; and thought that, as to that part of it that applied to a new trial, there was sufficient complication in the case to have it discussed, without saying whether the verdict of the jury was right or wrong; and were further of opinion that the work of Dr. Aikin should be considered as having been made use of at the trial, both parties having referred to it.

In support of the verdict it was urged that although the principles on which the patent was founded might have

been previously known, and although the various articles specified might have been previously used, yet the combination of those principles, and the use of those articles in certain proportions, in a new series of processes, leading to and terminating in a beneficial result, would support the novelty of invention claimed by the patent; the novelty of such combination and proportions, and the successful result of them, had not been controverted. The patent had not been taken out for too much, nor did the specification embrace more than the patentee was entitled to by his patent. Neither was the specification equivocal and ambiguous. Counsel further argued, it is not necessary that every information on such a subject as that with which this patent is conversant should be given by the specification. In such cases, general knowledge must be resorted to, and the party must carry a reasonable knowledge of the subject-matter with him to the perusal of the specification. Neither is it necessary that the processes or articles in such a case as this should be individually new. It is no objection to mechanical or chemical discoveries that the articles of which they are composed were known, and were in use before, provided the compound article, which is the object of the invention, be new; for it is settled law that the new combination of old materials may be the subject of a patent. The passage cited from Aikin only shows a previous knowledge of a mode of preventing the quality called "cold short," by fusing cast iron with equal parts of lime and scorix. The plaintiff claims the improvement of preventing it by the application of lime only. A witness, Robinson, had indeed made a mere series of private experiments, but if he made any discovery, he never made such discovery public. The answer of Buller, J., upon the objection raised to Dollond's patent, for the invention of achromatic telescopes (which objection was that Dollond was not the inventor of the new method of making the object-glasses, but that Dr. Hall had made the same discovery before him) applies to Robinson's experiments in this case. Buller, J., in the case of *Boulton v. Bull* (*ante*, p. 59), observed upon that objection that as Dr. Hall had confined the discovery to

his closet, and the public were not acquainted with it, Dollond was holden to be the inventor. To make Robinson's experiments destructive of the plaintiff's patent, they should have been communicated to workmen, and brought into efficient use in the manufactory. [DALLAS, J. If a person had done precisely all that is specified to be done in this specification, to prevent "cold short" in iron, and had not communicated it to any one, could he be prohibited by the patent from doing that which he had done before, though known to no one but himself, or could it be considered as new if practised by only one person, but not communicated to the world?] Such a previous use of an alleged discovery would, as it did in Tennant's Case, have gone far to destroy the patentee's rights. But here there had been no such use, and the verdict of the jury ratified the patentee's right to the invention which he had claimed.

In support of the rule it was contended: The patent is too large, has introduced nothing new, and if it had, it has not been infringed. It is too large, for it is taken out generally "for certain improvements in the smelting and working of iron," and cannot be understood to apply particularly to the smelting and working of iron obtained from slags or cinders, to which it is narrowed in the specification. The patent ought to have been confined to improvements in the smelting and working of iron obtained from slags or cinders, and to the application of lime for the prevention of the quality called "cold short" in iron so obtained. In 1800 and 1801 Matthias Koops took out two patents; the first for a method of manufacturing paper from straw, hay, thistles, waste and refuse of hemp and flax, etc., fit for printing upon; the second, for a method of manufacturing paper generally from like substances, enumerating them. This was a distinct notice of his invention, and accordingly William Pleeas, in his patent for a method of manufacturing paper for various purposes, taken out in 1802, was enabled to steer clear of Koops' invention. The case of Lord Cochran *v.* Smethurst (*ante*, p. 228) is conclusive against the plaintiff upon this part of the case. As to the alleged novelty of the method of extracting iron from slags, and pre-

venting the quality called "cold short" by the application of lime, stated in the specification, the evidence is all against the plaintiff. He has produced no definite improvements or new beneficial result, for when his combinations were discarded, the result was equally beneficial. The passage in Aikin is completely destructive of the plaintiff's case as to his claim for the invention of applying lime as a prevention of the quality called "cold short;" the word "scoriæ," adverted to by the plaintiff's counsel, is only a synonym for slags or cinders. After reading that passage, it can never be said that the plaintiff, in the words of the specification, has discovered that the addition of lime or limestone would sufficiently prevent or remedy that quality in iron from which it is called "cold short." In *Bovill v. Moore* (*ante*, p. 231) the greater part of the processes which formed the combination on which the patent was founded had been used before; the subsequent stages were new; but there, as in this case, the plaintiff had in his specification described an invention to a greater extent than the proof warranted, and the patent could not be sustained.

DALLAS, J. The declaration, in substance, charges an infringement of the patent, and the jury have found for the plaintiff. The finding involves, 1, that the patent is valid, subject to every legal consideration in this respect; and, 2, that the defendants have worked according to the specification, and have thereby infringed the plaintiff's right. The last point, if properly found, leads to the first consideration, viz., the validity of the patent; but if it ought not to have been so found, then the validity becomes immaterial; for whether the patent be valid or not signifies nothing in this particular case, if the defendant has not worked according to the specification.

To prove the infringement of the patent, one witness only was called; and this part of the case depends, therefore, entirely upon his testimony. And, before adverting to the evidence in question, it will be necessary to look to the patent, as far as it relates to this part of the subject. It has not been contended that it is a patent introducing into

use any one of the articles mentioned, singly and separately taken ; nor could it be so contended, for the patent itself shows the contrary ; and if it had been a patent of such a description, it would have been impossible to support it ; for slags had undoubtedly been made use of previously to the patent, so had mine rubbish, and so had lime. But it is said it is a patent for combinations and proportions, producing an effect altogether new by a mode and process, or series of processes, unknown before ; or, to adopt the language made use of at the bar, it is a patent for a combination of processes altogether new, leading to one end ; and this being the nature of the alleged discovery, any use made of any of the ingredients singly, or any use made of such ingredients in partial combination, some of them being omitted, or any use of all or some of such ingredients, in proportions essentially different from those specified, and yet producing a result equally beneficial (if not more so) with the result obtained by the proportions specified, will not constitute an infringement of the patent.

It is scarcely necessary here to observe that a slight departure from the specification for the purpose of evasion only, would, of course, be a fraud upon the patent ; and therefore the question will be whether the mode of working by the defendant has or has not been essentially or substantially different. For this we must look to the evidence of E. Forman ; and he being the single witness to the point, by his testimony this part of the case must stand or fall. It may be difficult entirely to reconcile different parts of his evidence with each other, if his answers to the several questions be taken separately and detached ; but looking to the result, it seems to be clear. On the part of the plaintiff he proves that, before the patent was taken out, the defendants were not in the habit of making use of slags, and that his attention being called to the subject by the patentee in the first instance, and then by the patent itself, he has made use of them uniformly since ; he has since also at times used mine rubbish, and also lime, which last, he also admits, was used to prevent the " cold short," which defect he allows was and is thereby prevented. So far, therefore,

he proves separate use and occasional combination. He is next asked, as to the proportions mentioned in the patent : "Did you apply the lime in these proportions?" His answer is, "I say, no, to that." "Have you worked by the specification?" "No ; we did not." He then explains in what respects they departed from the specification. This is his evidence on the examination-in-chief. On the cross-examination he says that the proportions used were very materially different, and that the proportions in the patent are not essential ; that it would make no difference to him if he were to be restrained from using these proportions, and that the result would be better obtained by materially departing from them ; indeed, by almost losing sight of them altogether. With respect to slags, on reconsideration he states that the defendant had used slags previously to the patent, in the puddling furnace, for months together. As to mine rubbish, he says, we varied the proportions, and we found in experience that the use of it was best without reference to the preparations and restrictions pointed out in the specification, and when omitted, the result was best of all. It is true, he afterward states, that this omission took place when he was absent from home, and that on his return he ordered the mine rubbish to be restored ; and in this respect, and going to this single point, there appears to be an inconsistency. But still, as the case stands on his single evidence, if, in substance and result, it proves a mode of working essentially different from the specification, the foundation of the plaintiff's case is altogether gone. And the rule is in this respect strict, as stated by Buller, J., in the case of *Turner v. Winter* (*ante*, p. 43). In that case, the learned judge expressed himself in these words : "Whenever the patentee brings an action on his patent, if the novelty or effect of the invention be disputed, he must show in what his invention consists, and that he procured the effect proposed in the manner specified ;" and in another part of the same case, he adds, "Slight defects in the specification will be sufficient to vacate the patent ;" and speaking of degree and proportion, he says, "The specification should have shown by what degree of heat the effect was to

be produced." In that case, as in a great variety of others, instances may be found to show the strictness of the law as bearing upon this point, either in regard of omission, or of superfluous addition, or of uncertainty or insufficiency in quantities proposed. But, further, the evidence so applied does not confine itself to this point only ; for it disproves also utility, as far as it depends on combination and proportion, leading and conducing to a specific result. Neither can it be justly said that the use of the separate ingredients, or some of them partially combined, is a use made of the invention in part so as to support the counts adapted to such partial use ; because, as it has been already observed, and will more particularly be adverted to hereafter, each of the ingredients had before been separately used, and had been used, more or less, in partial combination.

On the whole, our opinion is, as to this part of the case, that considering the evidence of Forman in its substance and result, and with reference to the peculiar nature of the patent, an infringement of the patent is not thereby proved.

And here I might stop, but, from consideration for the parties, it may be proper to dispose of the next ground on which the rule was obtained, namely, that the invention claimed is not new ; and this, like every other patent, must undoubtedly stand on the ground of improvement or discovery. If of improvement, it must stand on the ground of improvement invented ; if of discovery, it must stand on the ground of the discovery of something altogether new ; and the patent must distinguish and adapt itself accordingly. If the patent be taken out for discovery, when the alleged discovery is merely an addition or improvement, it is scarcely necessary to observe that it will be altogether void. Of which description this patent is will be hereafter examined ; at present it will be sufficient to say that the grounds of novelty and discovery are those on which it must stand. If the discovery claimed were known and made use of before, the patent is at an end.

Now, with reference to this particular case, it may be proper shortly to consider what novelty and discovery are deemed to be ; and when I say novelty and discovery, I

mean to distinguish between those terms; for it is not enough to have discovered what was unknown to others before, if the discovery be confined to the knowledge of the party having made it; but it must have been communicated, more or less, or it must have been more or less made use of, so as to constitute discovery, as applied to subjects of this sort. The case of Dollond (*ante*, p. 9) has been mentioned at the bar, as also Tennant's patent for bleaching liquor (*ante*, p. 115), and they stand so contrasted as to illustrate the distinction to which I allude. In Dollond's case the question was, Who was the true inventor within the meaning of the statute? Hall had made the discovery in his closet, but had never made it public; and on this ground, Dollond's patent was confirmed. In Tennant's Case, the great utility of the invention was proved, and the general ignorance of the bleachers of it till after the date of the patent. But, on the other side, a bleacher near Nottingham deposed that he had used the same means of preparing his bleaching liquor for six years anterior to the date of the patent, but that he had kept his method a secret from all but his two partners and his two servants, concerned in preparing it. In addition to this, different conversations were proved to have passed between Tennant and a chemist of Glasgow before the patent, and in these conversations the chemist had suggested to Tennant the basis of the improvement in question. Under these circumstances, Tennant was deemed not to be the inventor, and a nonsuit took place. So, in the case of Arkwright's patent, with respect to a particular roller, part of the machinery, the evidence was that Arkwright had been told of it by one Kay; that being satisfied of its value, he took Kay for a servant, kept him for two years, employed him to make models, and afterward claiming it as his invention, made it the foundation of a patent. The same fact was proved as to a crank which had been discovered by a person of the name of Hargreave, which also had been adopted by Arkwright; and although it had been made use of in a degree before by a few, a general ignorance with respect to it was proved by a great number of persons in the trade.

BULLER, J., was of opinion that, though this might be perfectly true, that is, the general ignorance as to those improvements, it signified nothing; the fact that the witnesses on the part of the defendant had not heard of those improvements was no contradiction of previous knowledge and previous use by others. The close application of these decisions to the present case will appear as I proceed further; at present, I will only say, looking at the subject in question in this light, is the plaintiff to be considered as the inventor, be it improvement claimed, or be it altogether discovery? And this leads to the evidence in this respect.

On the part of the plaintiff several witnesses were examined, on whose testimony it will be sufficient generally to observe, they proved that, of whatever description that for which the patent was taken out may be deemed, it was altogether new to them. One witness in particular is entitled to have the greatest weight given to his testimony—I mean Mr. Mushet; he has himself published treatises on the subject of iron; he has studied the subject as matter of chemistry and science; his works have been received everywhere as a standard authority; and further, he is a person of the greatest and most extensive practical experience. His account of the patent in question is that it is a combination of processes known before separately, but in combination new, and producing a beneficial result. So far the case appears, upon the part of the plaintiff, to be strongly proved. But, first, it is to be observed that the evidence, be its strength what it may, is negative merely. The ignorance of the particular witnesses to which I allude may be perfectly true, consistently with a perfect knowledge by others of the existence of those materials, separately or in combination, and in a degree more or less extensive; and here Tennant's Case and Arkwright's Case, already mentioned, apply, being in this respect and to this point precisely similar.

But let us next look to the articles which, in substance and in the mode in which they are directed to be made use of, constitute the discovery claimed. Taken as separate ingredients, in this stage of discussion, I shall not dwell

upon them ; I will only generally say, that of slags or cinders, of mine rubbish, and of lime, as used in various ways, and generally considered as connected with the working of iron, not only knowledge but extensive use has been proved, and this by a great number of witnesses, the evidence being all on one side ; inasmuch as there is positive testimony against negative testimony, leaving a result of perfect consistency.

I come next to combination and proportion, considered with a view to utility. If Forman's evidence is to be our guide (and by his testimony the plaintiff must succeed or fail as to the defendant's working by the specification), he not only proves a departure from proportions, but a variation in combination or proportion. If the specific combination may be materially departed from, where is the line to be drawn, and what is there beyond general combination in this patent, which professes to be precise and specific in apportionment and application ? And it will be recollected that, with a little change of ground as urgency required, the case has been so represented and so argued at the bar.

Thus much of slags and mine rubbish. I have already spoken in part of lime ; but of this, which, though not the sole, seems to be the most material object, it will be necessary now to speak more fully.

First, then, consider the end to be attained, and next, the proposed means of attaining it. The purpose is to render bar iron more tough by preventing that brittleness which is called "cold short," and which renders bar iron less valuable ; the means of prevention stated are the application of lime. In what way, then, is lime mentioned in the patent ? The first part of the specification, in terms, alleges certain improvements in the smelting and working of iron, during the operations of the blast furnace ; and then, introducing the mention of lime, it states that the application of it to iron, subsequently to the operation of the blast furnace, will prevent the quality called "cold short."

So far, therefore, the application of lime is, in terms, claimed as an improvement, and nothing is said of any previous use, of which the use proposed is averred to be an

improvement ; it is, therefore, in substance a claim of entire and original discovery. The recital should have stated, supposing a previous use to be proved in the case, that "whereas lime has been in part, but improperly, made use of," etc., and then a different mode of application and use should have been suggested as the improvement claimed. But the whole of the patent must be taken together, and this objection will appear to be stronger as we proceed. And here again, looking through the patent, in a subsequent part of the specification, the word "discovery" first occurs ; and I will state the terms made use of in this respect—"And I do further declare that I have discovered that the addition of lime will prevent that quality in iron from which the iron is called 'cold short,' and will render such iron more tough when cold ; and that for this purpose I do add a portion of lime or limestone, to be regulated by the quantity of iron to be operated upon and by the quality of the iron to be produced, to be added at any time subsequently to the reduction in the blast furnace, and this from whatever substance the iron may be produced if expected to prove 'cold short.' " Now this appears to be nothing short of a claim of discovery, in the most extensive sense, of the effect of lime applied to iron to prevent brittleness, not qualified and restrained by what follows as to the preferable mode of applying it under various circumstances, and therefore rendering the patent void, if lime had been made use of for this purpose before, subject to the qualification only of applying it subsequently to the operations in the blast furnace.

How then is the evidence in this respect ? And, first, if the dictionary, so often referred to, in substance informed the public of what the specification or the patent professes to inform them, that will undoubtedly be the first discovery ; as in Arkwright's Case it was agreed that a book produced, printed and published previous to the patent constituted the discovery so as to negative invention by the patentee. It will be sufficient to read one passage from this dictionary. Rinman says that cast iron, which by the common treatment would yield "cold short" bar, may be

made to afford soft malleable iron by fusing it with a mixture of equal parts of lime and scorise. I need not say that scorise are produced by the operation of the blast furnace ; and lime is proposed in combination with those.

Here then is "cold short" stated to be prevented by the application of lime subsequently to the operation of the blast furnace ; and in this view of the subject nothing turns upon precise proportion, the claim being a claim of discovery generally. This book was published in England in 1807, and the patent was taken out in 1816. In effect, therefore, this book completely negatives the novelty of the alleged discovery. But look to the other evidence of actual previous use in various instances in this country. I will shortly state part of it only, the whole being consistent in this respect. One of the witnesses, Northall, is asked (the question going back many years before the patent), "Did you know how to prevent the quality of 'cold short' in the iron produced from the cinder?" His answer is, "By the application of lime in the puddling furnace." Now the puddling furnace is one of the stages in which, by the express words of the specification, the lime for this purpose is to be applied ; but this, he adds, he heard from one person only, and therefore this, if it stood singly, might be considered as slight proof. I will not stop to inquire whether this evidence alone would or would not be sufficient, according to the cases which have been decided ; but let me next see what further knowledge, and beyond this what use is proved, not only in one, but in many instances, and by the different witnesses called, only observing, before I quit the evidence of this witness, that this question appears to have been put to him by one of the jury :—"You say that you knew that using lime would prevent the 'cold short ;' can you tell us how it ought to be used?" The answer is, "In the puddling furnace." There is much other evidence to the same effect, but I shall content myself with referring to that of Mr. Robinson. He produced a journal of entries, in which successful experiments were noted, at the time they were made, of the application of lime both in the puddling and refinery furnaces, for the express purpose of pre-

venting the "cold short," followed up by a continued use from 1808 to 1816 (a period of eight years anterior to the patent), when the works which he superintended stopped. The application, therefore, of lime in some way for the purpose proposed, instead of being a secret unknown before, was as public as it could be rendered by a work of extensive circulation; and in every view of the subject, therefore, this claim had been more or less in actual use in this country, so that the present patent would in effect operate as an abrogation of vested and existing rights. I am now upon the subject of the general application of lime claimed as a discovery, without reference to specific apportionment, except as before mentioned.

On this part of the case I will only further remark that if any part of the alleged discovery, being a material part, fail (the discovery in its entirety forming one entire consideration), the patent is altogether void; and to this point, which is so clear, it is unnecessary to cite cases. In every view of the subject, therefore, the claim to invention and novelty fails, not only virtually and technically, as the patent and specification are framed, but in effect and substance, and in the broadest and most enlarged view of the subject. At the time of the trial, the utility of the alleged discovery being admitted, the fairness of the specification being established, and the publicity afforded by the patent compared with the partial and previous limited use, giving to the public, as it appeared to me, all but the benefit of actual and original discovery, constituted a case so far favorable to the plaintiff; but, looking to the strictness with which, on the point of discovery, patents must be construed, looking to the decisions in cases of the nearest analogy, and to the peculiar nature of this case under all its circumstances, we feel ourselves bound to decide against the originality of that which is claimed by the patentee as new. On both grounds, therefore—1, that no infringement of the patent has been proved; and 2, that the invention is not new—we are of opinion that the plaintiff is not entitled to recover.

It was then objected that the court could not in this case

direct a nonsuit to be entered, but should grant a new trial only; but

DALLAS, J., stated that if he had not wished to give the parties an opportunity of going into the whole of the case, he should have nonsuited the plaintiff on the evidence of Edward Forman.

Rule absolute for a nonsuit.

Best on a subsequent day moved, on the authority of *Minchin v. Clement* (1 B. & Ald. 852), that this nonsuit should be set aside, and a new trial had. He urged that he should have had a bill of exceptions, of which he was now deprived, and that his client was in possession of a verdict which, by the course adopted by the court, was taken from him.

Dallas, J., repeated his observations above made; and Burroughs, J., said that the course adopted by the court as to the judgment was the result of great consideration both in public and in private.

THE KING v. WHEELER.

King's Bench, Hil. T., 1819.

Sufficiency of Specification. "Manufacture."

The specification in a patent for "a new or improved method of drying and preparing malt" stated that the invention consisted in exposing malt previously made to a very high degree of heat; but it did not describe any new machine invented for that purpose; nor the state, whether moist or dry, in which the malt was originally to be taken for the purpose of being subjected to the process; nor the utmost degree of heat which might be safely used; nor the length of time to be employed; nor the exact criterion by which it might be known when the process was accomplished.

Held, 1. The patent was void, both because the specification was not sufficiently precise, and because the patent appeared to be for a different thing from that mentioned in the specification.

2. As the word *malt* was here not to be taken in its usual sense, viz., of an article used in brewing, but that of one used in coloring beer, the specification should have stated the purpose to which the prepared malt was to be applied, and should have said that the patent was obtained for a new method of drying and preparing malt to be used in coloring beer.

3. The word "manufacture" in 21 Jac. I., c. 8, seems to be confined either to some new article or to some new instrument, or part of an instrument, to be

used in making an article previously well known ; and at all events no merely philosophical or abstract principle can answer to that word, or be the subject of a patent.

Motion for a new trial.

The cause was a *scire facias* to repeal a patent. The patent in question was granted to Daniel Wheeler, dated September 27, 1817, for "a new or improved method of drying and preparing malt."

The cause was tried before Abbott, C. J., who held that the title of the patent showed that it had been obtained for a different thing from that stated in the specification ; the patent being for "preparing malt," which must mean making malt from barley, whereas the specification appeared to be for *drying* malt already made. He thought that it was also defective in not stating the purposes to which the article, when prepared, was to be applied ; and that it did not describe the process with precision sufficient to enable other persons afterward to use the invention.

Motion was now made on behalf of the patentee for a new trial, on the ground that these objections were not sufficient to destroy the patent. The arguments were that malt is completed by the process of soaking the barley, and thereby producing germination, and the operation of drying is only necessary for the purpose of keeping it. The patent, therefore, which states that it is for a new method of drying and preparing malt obviously means that it is to be taken in the state of malt before it is to be dried or prepared ; and the invention here, which is of great value to the public at large, only consists in giving particular qualities to malt already existing. Besides, the order of the words "drying and preparing" also shows that the latter cannot be used here in the sense of making malt from barley. Then, as to the second objection, it is not necessary, in general, for a party to state the object to which the thing invented is to be applied. It is still less so here, for here the invention consists in a new mode of preparing a well-known article, and the presumption therefore is that the article, when pre-

pared, will be applied to the old uses. In this case the malt is used, as all brown malt is, for the coloring of beer ; and the great advantage is that the same object is obtained with a less quantity. Then as to the objection that the specification is not sufficiently distinct in stating all the modes of effecting the process, and omitting to say in what state the malt is originally to be taken, whether wet or dry, the answers are, 1, that if even one mode of effecting it is distinctly pointed out, that is sufficient ; and, 2, that whether the malt be taken in a wet or dry state is obviously immaterial, for the process is to be continued as far as 400° of heat, while, as is well known, at 212° all moisture will evaporate ; therefore, to state that circumstance with precision in the specification was wholly unnecessary. And the court will not, upon light grounds or trivial mistakes, set aside a patent which has been obtained for a useful and valuable invention.

ABBOTT, C. J., delivered the opinion of the court.

We have taken time to consider this case, not by reason of any doubt entertained upon the motion, but in order that the defendant, whose rights will probably be concluded by our judgment, might not be affected by any other than a deliberate and considered opinion. This was a *scire facias* to repeal a patent, granted to the defendant for what is called in the patent "a new or improved method of drying and preparing malt." The patent is granted under several conditions and provisos, as usual in such cases, and among others a proviso that if the defendant shall not particularly describe and ascertain the nature of his invention, and in what manner the same is to be performed, by an instrument in writing under his hand and seal, to be enrolled in the High Court of Chancery within six calendar months, then the patent shall be void. Several issues were taken upon the record of the *scire facias*, one of which was upon the fact of the enrolment of such a writing (or specification, as it is commonly called) as is required by the proviso. The cause was tried before me at the sittings after the last term, when, upon reading the patent and specification (for a

specification had been in fact enrolled), it appeared to me that the proviso had not been complied with ; and this question arising upon written instruments, and being, therefore, properly a question of law, I directed the jury to find a verdict for the Crown upon that issue, which was accordingly done.

In the present term a motion was made for a rule to show cause why the verdict should not be set aside, and a new trial granted ; and upon this motion the defendant has a right to assume, for the present, that the novelty and utility of his invention might have been established by proof ; and the question before the court is precisely the same as that which I determined at *Nisi Prius*, and depends entirely upon the construction and effect of the written instruments, viz., the patent and specification. And upon this question my brothers Bayley and Holroyd agree with me in thinking that our decision must be against the defendant. My brother Best having been engaged when he was at the bar in some of the earlier stages of this proceeding, has declined taking any part in our deliberations.

The language in which the supposed invention is described in a patent of this nature is the language of the patentee himself. He represents to the Crown that he has invented this or that thing, and that he is the first and sole inventor thereof, etc. ; and the Crown, yielding to his representation of it, and willing to give encouragement to all arts and inventions that may be for the public good, grants to the patentee the sole liberty and privilege of using his said invention, for a certain term, under the conditions before noticed. It is obvious, therefore, that if the patentee has not invented the matter or thing of which he represents himself to be the inventor, the consideration of the royal grant fails, and the grant consequently becomes void. And this will not be the less true if it should happen that the patentee has invented some other matter or thing, of which, upon a due representation thereof, he might have been entitled to a grant of the exclusive use. It is well known that the granting of monopolies was restrained by the Statute of Monopolies, 21 Jac. I., c. 3, to the sole working or making of any manner

of new manufacture, and to the true and first inventor of such manufactures. Now the word "manufacture" has been generally understood to denote either a thing made, which is useful for its own sake, and vendible as such, as a medicine, a stove, a telescope, and many others, or to mean an engine or instrument, or some part of an engine or instrument, to be employed either in the making of some previously known article or in some other useful purpose, as a stocking-frame, or a steam-engine for raising water from mines; or it may, perhaps, extend also to a new process, to be carried on by known implements, or elements acting upon known substances, and ultimately producing some other known substance, but producing it in a cheaper or more expeditious manner, or of a better and more useful kind. But no merely philosophical or abstract principle can answer to the word "manufactures." Something of a corporeal and substantial nature, something that can be made by man from the matters subjected to his art and skill, or, at the least, some new mode of employing practically his art and skill, is requisite to satisfy this word. A person, therefore, who applies to the Crown for a patent may represent himself to be the inventor of some new thing, or of some new engine or instrument. And in the latter case, he may represent himself to be the inventor of a new method of accomplishing that object which is to be accomplished by his new engine or instrument, as was the case of Watt's patent, in which he represented himself to be the inventor of a new method of lessening the consumption of steam and fuel in fire-engines, and by his specification he described certain parts to be used in the construction of fire-engines. Or, supposing a new process to be the lawful subject of a patent, he may represent himself to be the inventor of a new process, in which case it should seem that the word "method" may be properly used as synonymous with process. The language of the patent may be explained and reduced to certainty by the specification, but the patent must not represent the party to be the inventor of one thing, and the specification show him to be the inventor of another; because, perhaps, if he had represented himself as

the inventor of that other, it might have been well known that the thing was of no use, or was in common use, and he might not have obtained a grant as the inventor of it.

Now to apply these general principles to the patent and specification before us. The defendant has represented himself to the Crown to be the inventor of "a new or improved method of drying and preparing malt." Malt was an article of common use before the granting of this patent, possessing qualities long and well known, and prepared or made by a process practised for many years, of which drying was one of the last stages. And it is, in our opinion, impossible to read this patent without supposing the patentee to claim the merit of having invented some new or improved method, either of process of preparing, or at least of drying this old and well-known article.

Then has the patentee, by his specification, shown himself to be the inventor of any method of drying or preparing this well-known article? For this we are to look at the specification, and we there find that he claims to be the inventor, not of a method of drying or preparing this well-known article, but of a method of giving to it, when previously prepared, some qualities which it did not possess before, or which it possessed only in a very slight degree; namely, the qualities of being soluble in water, and coloring the liquor in which it shall be dissolved, which latter is the object in view. And this is to be effected by a second and additional process, the application of a very high degree of heat. We think the invention mentioned in this specification so entirely different from that mentioned in the patent as that the latter (if any such there be) remains wholly undescribed and unspecified, and consequently that the issue could not be found for the defendant.

It was contended that this process was, in fact, a preparation of malt to answer a particular purpose, and that the purpose need not be noticed in the grant. It may be true, in general, that the purpose need not be mentioned in the grant; but if in any particular case the mention of the purpose be necessary to explain the words previously used, to show that they were not used in their ordinary and obvious

sense, but in a sense limited and confined to that particular purpose,—in such a case, we think, the purpose ought to be mentioned. In this case, if the patentee had represented himself to be the inventor of a method of preparing malt for the purpose of coloring beer and porter, every person who read his representation would understand that the malt, prepared according to his method, was not intended to answer the common and known purposes of that article, viz., the brewing of beer, but was intended only for the special and particular purpose of coloring the liquor, and to be used in addition to common malt. But, as we have before intimated, we think no person could conjecture that to be the object of the invention mentioned in this patent. This being our opinion, it is unnecessary to say whether or not a patent for a new method of drying and preparing malt for the coloring of beer might be good as a patent for the manufacture, that is, for the malt so dried and prepared, if followed by a sufficient specification, which it probably might be, nor is it necessary to notice at any length the apparent defects in the specification accompanying the present patent.

It was argued that the term "malt" is applied to the grain as soon as it has germinated by the effect of moisture, and before it has been dried ; that malt in that state might be taken and used for the objects of the defendant's invention ; and that as these were to be accomplished by heat, his was an invention for drying malt. But if this were so, then the specification would be defective in not informing the reader that the malt to be used for the intended object might or ought to be taken in that state, or after drying, which, according to the common use of the word "malt," he might very reasonably suppose.

Again, this is a patent for the invention of a method, that is, of an engine, instrument or organ, to be used for the accomplishment of some purpose, or at least of a process to be so used. The patentee does not profess to be the inventor of any engine, instrument or organ. He says that a coffee-roaster, or a kiln, or anything by which the grains may be kept in motion during their exposure to the

requisite degree of heat, may be used. Neither has he described any certain or precise process, which, admitting that there may be a patent for a process only, ought unquestionably to be done. He does not mention the state in which the malt is to be taken for the purpose of undergoing the process, whether in a moist or dry state, as was before noticed ; he does not say what heat beyond 400° of Fahrenheit may be used ; he does not furnish the operator with any means of knowing when he has this degree of heat ; he does not say during what space of time the process is to be continued, but contents himself with saying that " the proper degree of heat and time of exposure will be easily learned by experience, the color of the internal part of the prepared grain affording the best criterion," not even mentioning what the color is which is to be the criterion. A specification which casts upon the public the expense and labor of experiment and trial is undoubtedly bad.

If it be said that all these matters will be well or easily known to a person of competent skill (and to such only the patentee will be allowed to address himself), then the inventor will not in reality have given any useful or valuable information to the public ; so that, in either way of viewing the case, there is either no certain and clear process described, or the process described is such as might be practised without the assistance of the patentee.

For these reasons we think the direction at *Nisi Prius* was right, and consequently that no rule should be granted.

Rule refused.

WOOD v. COCKERELL.

Chancery, Aug., 1819.

Injunction. Validity and Infringement both Doubtful.

Motion for injunction.

Lord Chancellor ELDON. This is a motion by the patentee of a machine for spinning cotton that the defendant

A.D.1807.APRIL 11.Nº 3032.
FORSYTH'S SPECIFICATION.

FIG. 1ST.

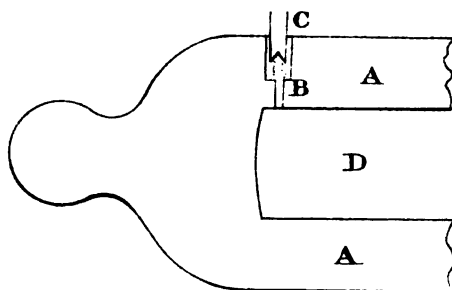


FIG. 2ND

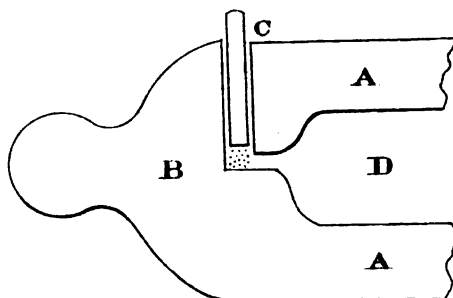
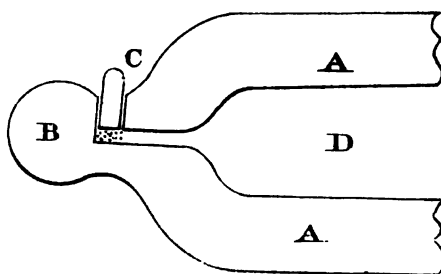


FIG. 3RD



The enrolled drawing, is colored.

FIG. 4TH

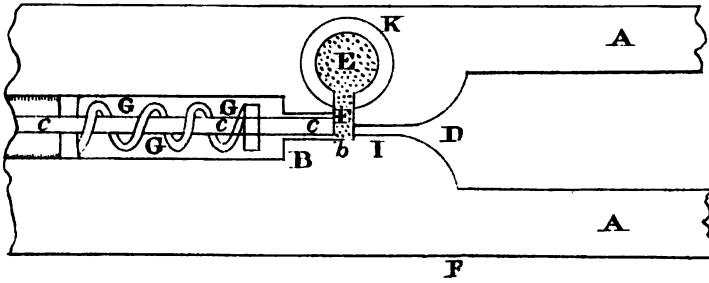


FIG. 5TH

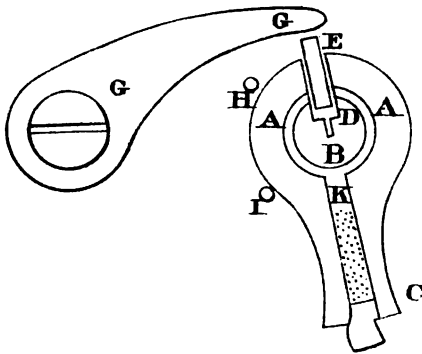


FIG. 7TH

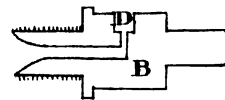
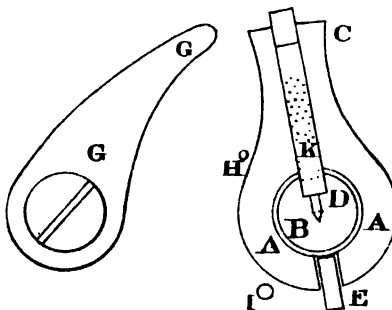
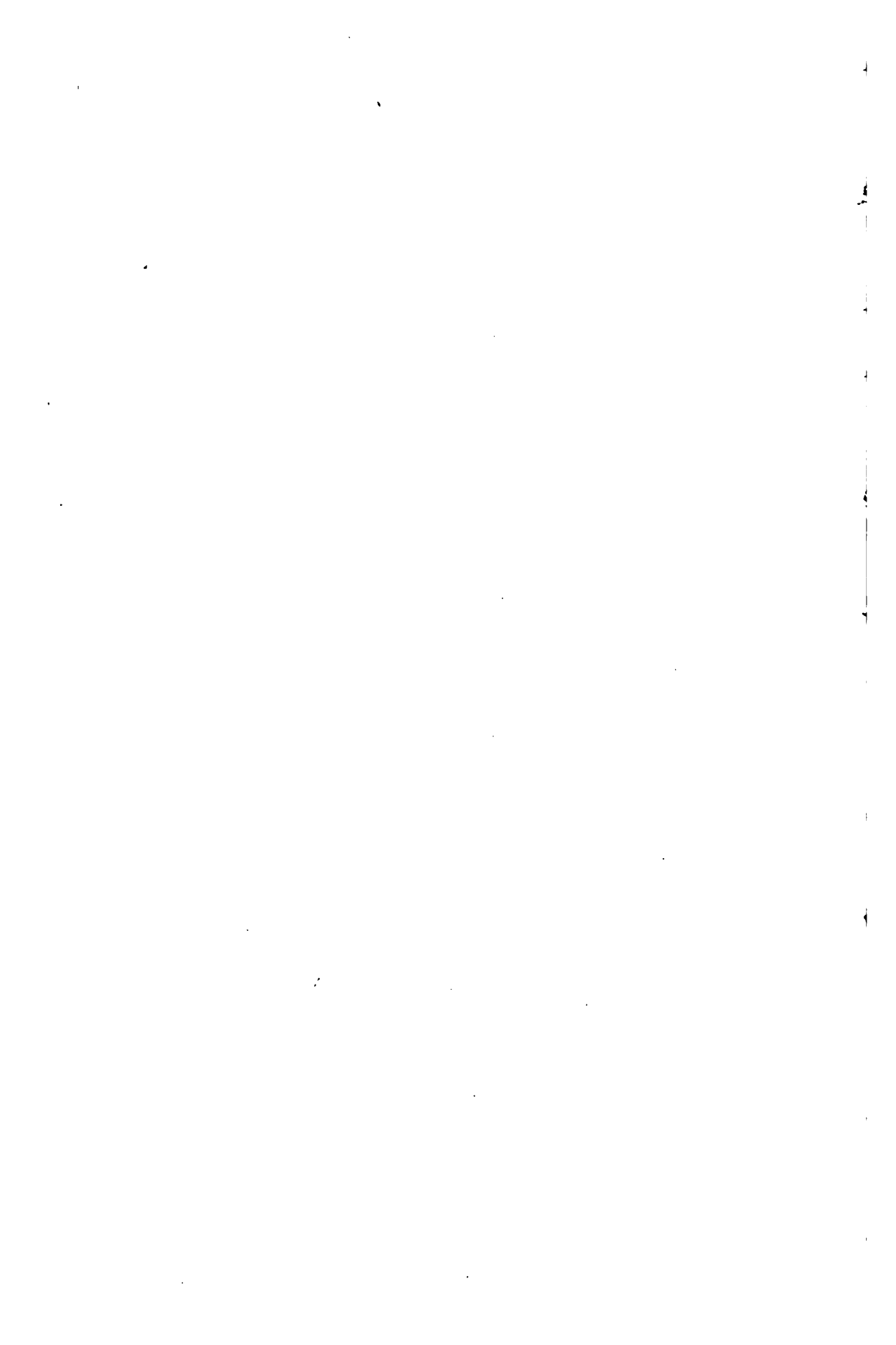


FIG. 6TH





Forsyth's Improvements in Apparatus for Discharging Artillery, &c.

NOW KNOW YE, that in compliance with the said proviso, I, the said Alexander John Forsyth, do hereby declare that the nature of my said Invention of an advantageous method of discharging or giving fire to artillery and all other fire-arms, mines, chambers, cavities, and places in which gunpowder or other combustible matter is or may be put for the purpose of explosion, is expressed in the foregoing general description thereof, and the manner in which the same is to be performed is as follows, that is to say :

First, as to the chemical plan and principles thereof, instead of permitting the touch-hole or vent of the pieces of artillery, fire-arms, mines, chambers, cavities, or places to communicate with the open air, and instead of giving fire to the charge by a lighted match, or by flint and steel, or by any other matter in a state of actual combustion applied to a priming in an open pan, I do close the touch-hole or vent by means of a plug or sliding piece, or other fit piece of metal or suitable material or materials, so as to exclude the open air, and to prevent any sensible escape of the blast or explosive gas or vapor outwards, or from the priming or charge, and as much as as possible to force the said priming to go in the direction of the charge, and to set fire to the same, and not to be wasted in the open air ; and as a priming I do make use of some or one of those chemical compounds which are so easily inflammable as to be capable of taking fire and exploding without any actual fire being applied thereto, and merely by a blow, or by any sudden or strong pressure or friction given or applied thereto without extraordinary violence ; that is to say, I do make use of some one of the compounds of combustible matter, such as sulphur or sulphur and charcoal, with an oxymuriatic salt, for example, the salt formed of dephlogisticated marine acid and potash (or potasse), which salt is otherwise called oxymuriate of potash ; or I do make use of such of the fulminating metallic compounds as may be used with safety, for example, fulminating mercury, or of common gunpowder mixed in due quantity with any of the before-mentioned substances, or with an oxymuriatic salt as aforesaid, or of suitable mixtures of any of the before-mentioned compounds ; and these compounds or mixtures of compounds I find to be much better for priming than gunpowder used alone, which cannot be made to explode without some sparks or actual fire applied thereto, or else without such a degree of extraordinary and violent percussion as cannot conveniently be made use of in gunnery, or with any of the fire-arms or artillery that are in most general use. But it is to

be observed that I do not lay claim to the Invention of any of the said compounds or matters to be used for priming, my Invention in regard thereto being confined to the use and application thereof to the purposes of artillery and fire-arms as aforesaid; and the manner of priming and exploding which I use is to introduce into the touch-hole or vent, or into a small and strong chamber or place between the said touch-hole and vent, and the plug or sliding piece, or other piece by which the communication with the external air is cut off, a small portion of some or one of the chemical compounds herein-before mentioned (for example, as for priming to a musket, about the eighth part of a grain), and when the required discharge is to be made I do cause the said chemical compound or priming to take fire and explode by giving a stroke or sudden and strong pressure to the same, communicated by and through the said plug or sliding piece, or other piece before mentioned or described, in consequence of which the fire of the priming is immediately communicated to the contents or charge placed within the said piece of artillery, fire-arm, mine, chamber, cavity, or place, and the discharge accordingly follows.

And, secondly, I do hereby further declare, for the better illustration of my said Invention, and as auxiliary to the use thereof in relation to the mechanical parts thereof, that I have hereunto annexed Drawings or Sketches exhibiting several constructions which may be made and adopted in conformity to the foregoing plan and principles out of an endless variety which the subject admits of. Figure 1st, represents the section of a piece of artillery where the charge is inflamed upon the upper side. Figure 2^d, represents the section of a piece of artillery where the charge is inflamed at one of its ends through a touch-hole in the line of direction of the barrel or bore of the piece. Figure 3^d, is a representation of the same thing as Figure 2^d, except that the narrow part of the touch-hole is lengthened more than in Figure 2^d. The same letters answer for the description of Figures 1, 2, & 3^d.

In Figure 1st, A, A, represents the section of a piece of artillery; B, the touch-hole, of a cylindrical bore, excepting at the bottom, where it becomes a small perforation leading to the chamber. C, is a cylindrical punch or plug fitting the bore of B, and (if need be) clothed, packed, or faced near its upper part with leather or binding, or any other material proper to render its fitting more correct, and its motion easy and smooth. The lower part of C, is made to fit the lower part of the touch-hole B, and there is a small internal cavity at the lower part C, in which a portion of the said chemical compound may be lodged by dipping the said punch or plug therein; or a sufficient quantity of the said chemical compound is let fall into

B, part of which lodges upon the shoulder at B, Figure 1st, or in the bottom of the bore at B, Figures 2^d, and 3^d; and in this state the said punch or plug C, is to be inserted in the touch-hole; and a smart blow being given on its upper end, the said chemical compound being suddenly compressed between the two faces nearly in contact will explode and give fire to the remaining portion, and also to the charge. The apparatus, Figures 1, 2, & 3, is chiefly to be recommended for its simplicity, but it is attended with several obvious inconveniences.

Figure 4th, represents the section of an apparatus which may be used to prime and discharge a musket, or any other fire-arm, a great number of times, even altho' the breech of the same is under water. A, A, represents a section of the barrel of the piece; D, the chamber of the barrel, which is contracted to a narrow touch-hole at I, and open up to about double the diameter of the narrowmost part of the touch-hole at B, b. Into B, b, is introduced the rod or plug C, C, C, at b; where the touch-hole is opened wider there is another hole F, of the same diameter as B, b, and at right angles to B, b. A cylindrical piece of any proper metal with a hole nearly through it in the line of direction of the axis passes through the solid breech of the barrel as near to I, and b, as can be done with safety and convenience. There is also another hole in one side of the cylinder at right angles to its axis, and corresponding with the hole F, in the breech of the gun when the cylinder is fixed in its proper place; or, as the cylinder must be accurately fitted into the breech, and move round freely, this last-mentioned hole may stand either at F, or K. This first-mentioned hole in the cylinder E, is filled with any of the chemical compounds before mentioned; when the piece is to be primed the hole in the side of the cylinder E, is brought directly over F, and the powder falls out of the cylinder through F, into the small cavity at b, between the point of the rod or plug C, C, C, and the contracted part of the touch-hole at I, where the piece is to be discharged; the side hole in the cylinder E, is turned round to K, and the rod or plug C, C, C, impelled forward by the stroke of a hammer or spiral spring as at G, G, G, or by any other mechanical contrivance, so that by its pressure or concussion against the shoulder at I, it fires the priming contained in the cavity at b. H, H, is a screw, by which the power of the action of the spiral spring G, G, G, may be increased or diminished as necessary.

Figures 5th, and 6th, represent another apparatus, which may be used in the same manner as the preceding. The inner circle B, represents a section of a flat cylindrical piece, having a central stem on the opposite side or face to be screwed into the barrel where the touch-hole is com-

monly placed (another section of the cylinder B, is given Figure 7th). The axis or central line of the said stem is perforated or drilled up to half the thickness of the cylindrical piece so as to meet another hole D, B, drilled or made in the edge of the said piece. The space A, A, between the inner and outer circle denotes another flat piece, of which the inner part is hollowed out so as very accurately to fit the outside of the first-mentioned cylindrical piece, and to be capable of revolving upon it when turned by the handle C. At E, is a plug or punch inserted in the hole in the edge of the moveable piece, and kept from immediately touching the same by means of a spring of any suitable form. On the opposite part of the circumference of the moveable piece, and through the handle at C, there is bored a hole or cavity K, quite through to its inner surface, in which a considerable quantity of the chemical compound before mentioned is put and confined. G, is a cock or arm for giving a stroke upon E; it may be set, discharged, and impelled by the same machinery and means as are used with respect to the cock of a common gun lock, or the stroke may be given by any other means. The several parts of the mechanism are secured in their places by caps and screws, or by any other well-known means commonly used in works of this kind. In the use of the apparatus last described, the hammer G, is to be raised and cocked, and the handle C, brought round to the position, as in Figure 6th, where it is stopped by a pin or projecting piece H. At this instant the hole or cavity K, is brought immediately over the channel or hole D, B, into which a priming falls out of K, in consequence of the slight stroke or jar produced by the sudden stoppage of C. Immediately after this operation the handle is to be returned to its first position, as at Figure 5th, which brings the plug or punch E, directly over the channel or hole D, B, in which position only it is possible to give the stroke so as to inflame the priming and discharge the piece. When this last effect is required to be produced the trigger is to be drawn, and then G strikes E, and the contents of D, B, taking fire explode through the touch-hole, and set fire to the charge without allowing the escape of the gas or vapor in any direction but into the chamber and towards the muzzle of the piece.

may be restrained by injunction from making, selling or in any manner disposing of spinning-machines, made on the same principle as that for which the plaintiff's patent has been granted. The affidavits in support of the motion and in opposition to it are very contradictory. For the defendant, persons conversant with the subject swear that if the patent were expired no workman could manufacture a machine from it. It is also sworn that if there be any resemblance between the plaintiff's machine and that made by the defendant, the resemblance is very remote. For the plaintiff, it is said by persons equally versed in these matters that the plaintiff's specification is sufficiently intelligible, and that machines have been made from it by workmen of ordinary skill. The piracy, too, it is alleged, is plain and obvious. Now, where there is one question whether a patent is valid, and another question whether it has been infringed, this court would be going a great way if it took upon itself to grant an injunction.

FORSYTH v. RIVIERE.

King's Bench, Nisi Prius, 1819.

Priority among Inventors.

Among several simultaneous inventors, the one who first makes public the invention under a patent is entitled to the exclusive privilege.

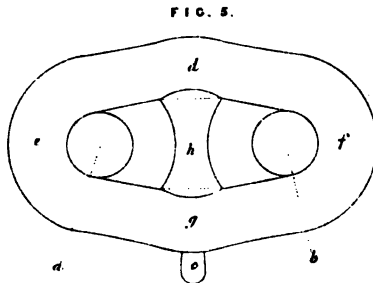
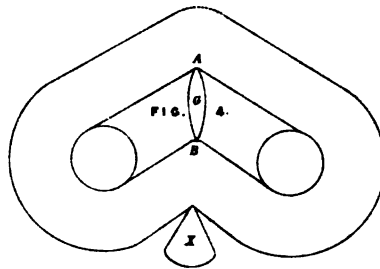
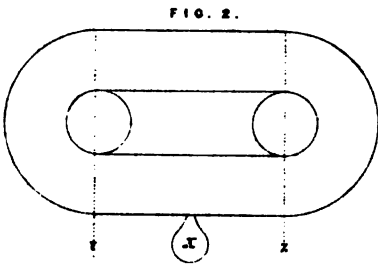
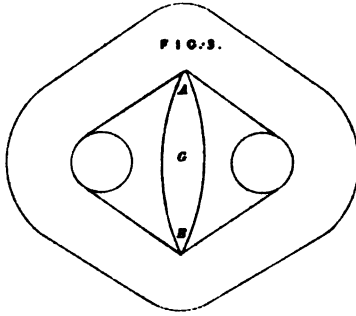
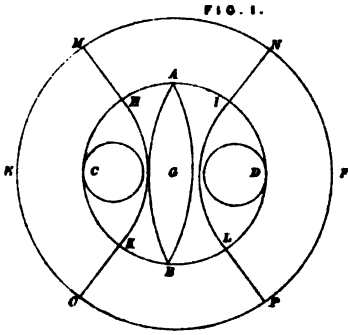
Trial of an action for infringement.

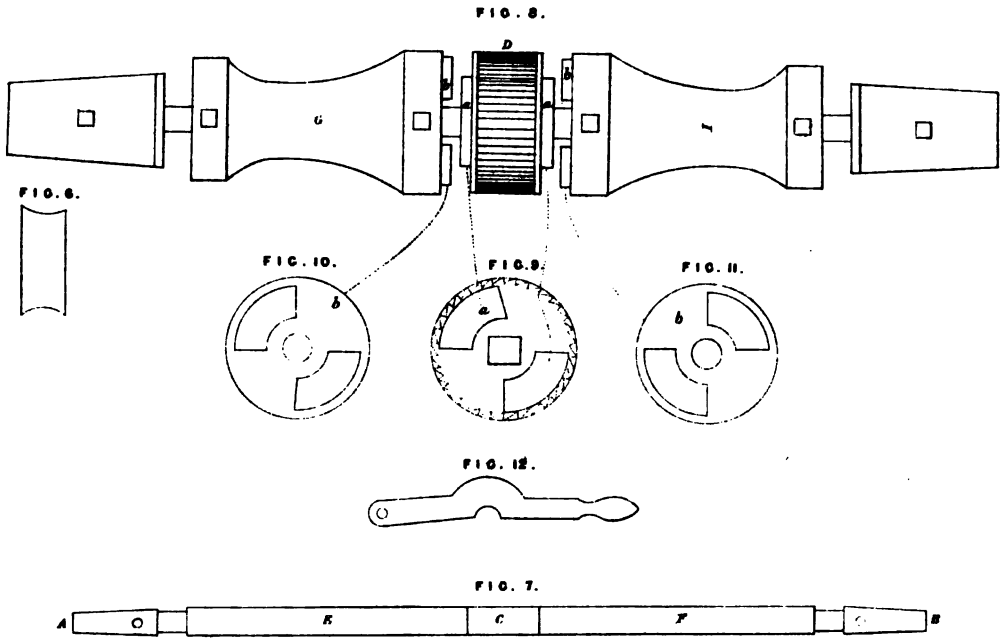
The patent in question was granted April 11, 1807, to A. J. Forsyth, numbered 3032, "for a method for discharging or giving fire to artillery and all other fire-arms, mines, chambers, cavities and places in which gunpowder or other combustible matter is or may be put for the purpose of explosion."

See specification and drawings.

One question involved in the case was that of priority of invention.

As to this proof was produced for the defendant that the





Brunton's Improvements in the Construction of Ships' Anchors, Cables, &c.

NOW KNOW YE, that in compliance with the said proviso, I, the said Thomas Brunton, do hereby declare that my said improvements in the construction, or making, or manufacturing of ships' anchors, and windlasses, and chain cables, or moorings, are described and specified in manner following, reference being had to the Drawings or Figures hereunto annexed, that is to say:—

In manufacturing ships' anchors, in place of the common method of joining the arms to the shank, which is by welding, and which requires the iron to be so frequently heated as often to destroy and injure its tenacity, I make the shank in one piece, and the two arms in another piece, as follows:—The piece intended for the arms is formed into shape, and of such a thickness or substance in the middle as to allow a hole to be made through the centre of the solid piece to receive the thick end of the piece which forms the shank, and the said hole in the arm piece is made somewhat conical or bill-mouthed, so that no strain can separate the arms from the shank, by which means I avoid the necessity of endangering the solidity of the materials, only one heat being necessary to bring the thick end of the shank and the hole in the arm piece into perfect contact, for I do not trust the strength of this important part of the anchor to a union effected by welding, which may, and generally is defective, but to the impossibility of drawing a thick, solid, conical piece of iron through the smaller aperture of a conical opening into which it is fitted. The arms with their flukes may be made of good cast iron, taking care to allow them sufficient substance. But anchors should not only have the utmost strength which can be attained, but also be made as secure as possible against the danger of being lost by the cable or chain by which they are attached to the ship giving way. Cables made of hemp can never be rendered safe, but chain cables may.

To convey correct ideas respecting my improvements in the construction of chain cables or moorings, it is necessary that I should point out and illustrate the principles which should guide the workman in his operations. These when thoroughly understood will not only enable him to avail himself of my improvements after the expiration of the said term, but will qualify him to detect, and consequently to avoid those errors and mistakes in form and construction which prevail more or less in all the chains that have hitherto been employed for cables or moorings.

The object to be gained is the greatest possible strength from a given quantity of materials, keeping in mind the direction in which the strain is to be borne. If the tendency of a strain applied to a link of a bad form be once properly conceived, a great step is gained towards the adoption of a good form.

Let A, B, Fig. 1, represent a circular link of a chain, the substance of the iron one inch. Let the outer circumference be fifteen inches, and let the

inner circumference be nine inches. If receding forces be applied to the two links C and D (shewn in section), pulling C towards E, and D towards F, the ultimate tendency of the effort of such forces is to change the form of the circular link into one which shall have round ends, and parallel sides as Fig. 2, but a very slight examination will shew that before this can be effected the link must be destroyed, for in such a circular link the corresponding segments of the outer and inner circumferences are in the proportion of five to three, and therefore every effort to increase the distance between C and D, or in other words to make the parts A and B approximate, must disturb the relative position of every particle of the metal, and operate to destroy its corpuscular attraction. Thus, (in Fig. 1) the segment M, N, of the outer circumference, being taken equal to three inches, the corresponding segment of the inner circumference will be one inch and eight-tenths of an inch. If this segment of the link is by the force of a strain to be changed from a curved to a straight form (as in Fig. 2), the corresponding segments of the outer and inner circumference must be brought to one length, to effect which the matter contained in three inches of the outer circumference must be compressed into one inch and eight-tenths of an inch, or the matter which now occupies only one inch and eight-tenths of an inch in the inner circumference must be made to dilate itself to three inches without losing its cohesion, or the required compression and expansion must be divided between the two, all of which are impossible without a derangement of the relative position of every particle in the mass.

To be brief, the matter in this part of the outer circumference may be conceived to present an infinite number of fulcrums over which the said receding forces by an effort to render the curve straight must rupture and separate the matter of the inner circumference. Nor is this the only mischief that must occur, as will appear by a consideration of what must take place where the link folds round C and D, for the larger semicircles in Fig. 2, each containing four inches and an half (nearly) of the outer circumference, answering to two inches and seven-tenths of an inch of the inner circumference of Fig. 1, must now correspond to the semicircumference of the links C and D, which are each only one inch and an half (nearly), so that in these parts the effect produced by the action of the said forces would be the same as in the former, but reversed in its operation, that is, the matter in these parts of the inner circumference presents an infinite number of fulcrums, over which the outer circumference must be ruptured and separated by the said forces. A circular is therefore a bad form, but from the foregoing it is obvious that if the parts A and B of the circular link, Fig. 1, can be prevented from approximating each other, the evil that has been pointed out will be lessened. Suppose a stay A, G, B, to be introduced for this purpose, and as before, let receding forces be employed in the directions C, E, and D, F, what will be the effect? The circular link will now be able to resist a greater force than before, having two points of support; but the unsupported parts between

the points A, C, B, and D will by the effort of the said force endeavour to assume a quadrilateral form, somewhat like Fig. 3, a change that cannot be effected without a derangement of the matter in the link, which must rupture and destroy it; such stays as A, G, B, (Figs. 1 and 3) have been used in chains, but such a stay only supports two opposite points in the link, and I have shewn that the tendency of receding forces applied as before described is to straighten, and consequently to rupture the parts that are still left unsupported.

My said improvements in chain cables or moorings are founded on considerations drawn from the facts that have been alluded to. If a circular link, instead of being supported only in the two opposite points A and B, have its opposite sides supported by a stay embracing two considerable and opposite segments, suppose H, I, and K, L, by the stay H, I, K, L, taking care to leave such openings as shall allow sufficient play for the links to be received into it, the link will be much stronger than with such a stay as A, G, B, but still the link will prove to be of a bad form, for the tendency of receding forces applied as before would break the piece M, O, K, C, H, over the point C, as a fulcrum, and the piece N, P, L, D, I, over the point D, as a fulcrum. And, moreover, even if circular links could be made unobjectionable as to strength, they should be avoided on account of the greater weight of metal, which a given length of chain would require, than when formed of links of a less exceptionable form. We have seen that the tendency of receding forces applied to curved links is to draw portions of them into straight forms, and hence it follows that twisted links of every kind should be avoided where strength is required, for such links, even if their opposite sides be supported by an interposed stay like A, G, B, must by the application of a sufficient strain untwist themselves to become straight, and thus have the arrangement of their particles disturbed. As the tendency of forces applied as before-mentioned to curved or twisted links is to convert the curves or distortions into straight positions as above described, it follows that links presenting in their original construction straight parts between the points of strain are the strongest that can be made with an equal portion of metal, and hence links with parallel sides and cemicircular ends would in every case be preferred, were it not necessary to the quality of good chain that it should be able to resist lateral violence as well as a general strain operating by stretching. Suppose that by any accident the link, Fig. 2, should have its ends drawn towards Y and Z, while a resisting body at X opposes its motion in the direction of the applied forces: the side of the link next to X would be bent inward, and if in such a link, a stay like A, G, B, were introduced, then the link would be solicited by the said force to assume a form somewhat like Fig. 4.

From the preceeding considerations it is evident that of all the forms and constructions that can be given to a link, that form and construction which shall be able to convert a lateral into an end strain, by yielding proper support to the opposite sides of the link, is the one that should be preferred, and of such

a form and construction is the link, Fig. 5, with my broad-ended stay introduced between the sides of the link; for if this link (which presents its principal substance, and all its points of resistance in the same place,) be drawn towards *a* and *b*, against an obstacle *c*, it is apparent from a bare inspection, that the parts *d*, *e*, and *d*, *f*, which are supported by the parts *g*, *e*, and *g*, *f*, must be drawn asunder before the link can give way, for the matter in *e*, *g*, and *f*, *g*, cannot be made to penetrate itself, and the two sides are compelled to retain their relative position by my interposed broad-ended stay *h*, a cross section of which through its middle is shewn in Fig. 6.

I need hardly add that at the time that the stay *h* is introduced, the link is wide enough to receive it, and the link being red hot at the time of its introduction, and being pressed home to the stay by a die or press, or any suitable mechanical means, takes a fast hold of it, and retains it in its place. Other ways of introducing and retaining in its place my broad-ended stay may be employed, but I have found the preceding exceedingly simple and efficacious.

On my broad-ended stays I have only farther to remark, that they should embrace the whole or the greater portion of the opposite curved parts of the middle of the link, and even if the middle of the link be made to form two opposite obtuse angles, the ends of the stay should not embrace much less than the proportion exhibited in Fig. 5; but in making the said ends to embrace any larger portion, provided sufficient room is left for the play of the links received into it, there will be no harm, only the chain will thereby be rendered heavier, which may sometimes though not generally be desirable. For veering away cables in general, and particularly chain cables, a good windlass has long been a desideratum.

My improvement in the construction of ships' windlasses consists in making the same or parts thereof to revolve on an axis, in place of having the whole in one solid piece. The axis *A*, *B*, Fig. 7, receives upon the square part *C*, the pall ratchet *D*, Fig. 8, and upon the cylindrical parts *E* and *F* it receives the two pieces *G* and *H*, Fig. 8, round which the chain or cable receives one or more turns. The said pieces *G* and *H*, are locked into *D*, or kept out of gear at pleasure by the checks or stops *a*, *a*, *a*, Figs. 8 and 9, and the counter checks or stops *b*, *b*, *b*, *b*, Figs. 8, 10, and 11, or by any other means. And when out of gear they are kept asunder by any proper formed prohibiter let down between them, as the piece; Fig. 12. The advantage of this construction is simply this:—In veering away the cable or chain the pieces *G* and *H*, having power to revolve on their axis, the friction and consequent wear and injury of the cable or chain which is inseparable from the usual method of allowing the same to be rubbed in their whole course against a stationary windlass, is entirely avoided. The construction just described has also this advantage, that the motion of the pieces *G* and *H* may be regulated by the contrivance called a break, and which being in common use for regulating velocities by means of friction needs no description.

in thinking that such an opinion, to whichever side it may lean, ought to have no influence with the court of common law." No materials for a complete report have been found.

BRUNTON v. HAWKES.

King's Bench, N. P., May 25, 1820.

Novelty. Utility. Description of Invention.

A drawing or figure which will enable workmen of ordinary skill to construct the improvement patented is as good as a written description.

Thomas Brunton's patent for improvements in the construction of ships, anchors, windlasses and chain cables or moorings sustained

Trial of an action for infringement.

The patent in question was granted to the plaintiff, dated March 26, 1815, for improvements in ships' anchors, windlasses, chain cables or moorings.

See specification and drawings.

Upon the trial many witnesses were called for the plaintiff to prove that the three parts of the patent were new and useful, and that the mode of making chains was a very great improvement in the manufacture of cables. Ship-owners spoke to their extensive use and practical advantage. Scientists testified to the great strength of the cables, and to the resemblance to them of those made by the defendants. They also stated that the specification fully described the invention, and that many experiments had been made by them in order to ascertain the relative strengths of cables made according to the plaintiff's patent and that of Captain Brown; that all previous chains for cables, where stays were used, had indentations formed on the interior of each link to receive the stays, which weakened the chain of a given weight; and that the form of the link shown in the patent was as necessary as the form of the link to the obtaining the greatest strength, and the greatest length of a cable with a given weight of metal. Evidence was given to show that after many experiments made with these chain

cables against those of Captain Brown, and also against hempen cables, the government had been induced to take the plaintiff's cables in preference to all others.

The *Solicitor-General* contended, on behalf of the defendants, that the patent being for three things, if either failed, the patent was bad altogether, and called on his lordship so to rule.

[ABBOTT, C. J. It is not necessary in the present stage of the proceedings to determine this point of law. I will reserve it, in case the question should assume a shape to render the determination needful.]

The *Solicitor-General* continued by stating that he should show that the anchors were old; that there were several classes of ships' anchors, many of which classes he should prove had been many years made according to the specification. Every anchor is a ship's anchor, and the patent being taken for ships' anchors, the making of any class of anchor, according to the patent, would be an infringement. If the patentee only intended to apply the mode of construction to a particular class of ships' anchors, he should have so stated it in his specification; in place of which, the specification was as general as the patent. He would also show that cables made with stays were not new; that he should not trouble the jury on the subject of the windlass. He called several witnesses to prove that many descriptions of chains had been made with stays; that in 1808 chains were made for two bucket-engines at Portsmouth, and for the bomb-proof well at Dover; that the chain from Dover came into the old stores at the Tower in 1815 and was sold. In cross-examination it was stated by the witnesses that these chains had not been used for cables, nor were they suitable for cables; that the links and stays were similar, though not the same as the plaintiff's. Anchor-makers and others were called to show that mushroom-anchors, adz-anchors and wedge-anchors for mooring ships and floating-lights were commonly made before the patent, as described in the plaintiff's specification; and that they only differed in the shape of the flukes from those usually carried by ships for the same purpose. Mooring anchors were used for station-

ary anchors. It was also shown that the plaintiff had lately made the sides of his links more parallel than in the specification.

Stephens submitted that the specification was bad in not giving any dimensions of the stay, and contended that a drawing or a figure was not an instrument in writing, as required by the patent. [ABBOTT, C. J. If a drawing or figure enables workmen of ordinary skill to construct the improvement, it is as good as any written description.]

Scarlett was about to reply, when the jury intimated that they had made up their mind.

ABBOTT, C. J. As the plaintiff's counsel has not addressed you, and as you state that you have made up your mind, and are masters of the case, it is unnecessary to recapitulate the evidence ; but, in giving your verdict, it may save trouble hereafter if you will state distinctly whether you find the chain-cables new and useful, and whether you find the anchors new and useful.

The jury immediately found that the windlasses, anchors and cables were all new and useful, and that the chain-cable had been infringed.

Verdict for the plaintiff.

Upon a motion for a new trial, the patent was, in effect, held void. See *post*, 337.

FEW v. GUPPY.

Chancery, Nov. 10, 1820.

Discovery of Part only of Matters in Controversy. Production of Documents. Accounting. Injunction.

Patentees filed a bill against infringers seeking a discovery ; but the bill failed to embrace the entire matter in controversy. The time within which the bill could be amended had elapsed. The action at law was not one which could be delayed. *Held*, that under these circumstances an application for leave to file a bill of discovery should be granted.

Application for leave to file a supplemental bill of discovery.

A bill, originally filed in 1827 in the name of Charles Few, set forth that patents were granted to Edward Charles Howard, dated October 31, 1812, November 20, 1813, August 4, 1814, all relating to the manufacture and refining of sugar. This bill also set forth that by certain deeds between the parties therein mentioned the several patents became vested in Charles Few, in trust for E. C. Howard in respect to two fifths, and in trust for T. Hodgson in respect to three fifths of all the benefits and advantages to be produced from the said patents. The bill also set forth that Samuel Guppy and Thomas Richard Guppy in 1826 took the business of Messrs. George, sugar-refiners of Bristol, who previous to their bankruptcy had been carrying on their business by the aid of the patent inventions of Mr. Howard, under license from the said plaintiff, Charles Few. The bill set forth various letters and communications which had passed between the defendants and the plaintiff, setting forth that the defendants were assignees of the license granted to the Messrs. George, and the correspondence also showed that the plaintiff claimed from the defendants patent rent, not only for the time they had been conducting the manufacture after the bankruptcy of the Messrs. George, but also for money due for working under the license by Messrs. George before their bankruptcy. The bill prayed that an account might be taken of all sugars made and sold under the license and of the selling prices, and that the defendants might be ordered to pay over the profits of such working, after making reasonable deductions for expenses, to the plaintiff; and it further prayed an injunction to restrain the defendants from working according to such letters patent. The answer of the defendants set forth that the patents were not good and valid in law, and that no good and sufficient specification had been enrolled according to the several provisions in the said letters patent. As a further defence, the answer set forth a deed of assignment between the said defendants and the assignees of Messrs. George, of the premises and works of the said Messrs. George, under which the defendants claimed that they had a right to ask for, and have assigned to them, the license

granted by the plaintiff to Messrs. George, and that having been advised that the patents were invalid, they had not heretofore availed themselves of the right of obtaining such assignment of the said license. The defendants admitted that they had been working according to the processes and machinery claimed by the patents of E. C. Howard, and they insisted that they had a right to do so without rendering any account for the same. The answer also stated that the defendants intended to continue the working, unless restrained by injunction, but submitted that they had a right to work as they had done by reason of the invalidity of the patents. Exceptions having been made to this answer, the defendants put in a further answer, showing how much sugar they had made according to the processes complained of, and stated that, owing to the extent and complexity of their business, they could not show how much profit they had made on the sugar made by that particular mode of manufacture. The bill, which originally was filed only in the name of Charles Few, was subsequently amended, and the persons beneficially interested were made joint plaintiffs with Mr. Few. By the further answer of the defendants they stated that the inventions were not fully or properly specified, and that the patents were invalid, and also that they had lately ceased working the manufacture according to the patent; at the same time claimed to resume working, if hereafter they thought it desirable so to do; and said, as a further defence, that they were advised and believed that each of the patents had been assigned or were in trust for more than five persons, contrary to the proviso in each of the said letters patent, and that the patents were clearly rendered invalid. One of the plaintiffs, Julia Howard, having been married, and another of the plaintiffs having had another child born, a bill of revivor and supplement was filed. No evidence was given on either side. The case having been argued, the Master of the Rolls made a decree retaining the bill for three years, with liberty for the plaintiff, C. Few, to bring an action or actions at law against the defendants, Messrs. Guppy, touching the matters in question. The defendants should

at the trial of such action or actions admit that Few was assignee of the letters patent, and that they had used the processes purporting to be claimed under such letters patent, and that the plaintiff, C. Few, should produce at the trial the several deeds in the pleadings mentioned, and admit the execution thereof. And should the plaintiff, C. Few, fail to proceed to trial, the bill to stand dismissed with costs, otherwise the costs were reserved. Both parties were to have liberty to apply.

The plaintiff, C. Few, brought an action in the Court of King's Bench against the Messrs. Guppy for unlawfully using the inventions secured by the said letters patent without license.

In this state of the proceedings the Messrs. Guppy filed a bill of discovery against Few, alleging that if the deed of trust and assignment were fully set out to the court, and a full discovery made of the trusts and matters contained, it would show that the patents were rendered void by the same being held in trust for more than five persons, and the bill further set forth that the said Few, and also the said E. C. Howard, had made various other assignments which divided the rights and privileges thereby granted into and among more than five persons, and contrary to the conditions of the said letters patent, which if fully brought before the court would show that the patents were bad in law ; and that for various considerations and payments the said Few had granted various licenses subject to various conditions, and had received money therefrom of several persons exceeding the number of five, by which the patents and each of them were held and divided among more than five persons entitled to divide the interests and advantages arising from the said letters patent and each of them, by which the said patents were rendered void. The bill prayed that the said Few should give answer and discovery to all matters mentioned in the bill, and a schedule of all grants and deeds, and all letters and papers relating thereto, which the said Messrs. Guppy contended would be a full and complete answer and defence to the proceedings taken against them by the said Few, and that without such answer, deeds

and documents, the said Messrs. Guppy would be unable to make a defence. The bill also prayed that all books and accounts and memoranda, in any way relating to the said letters patent, should be set out and disclosed or scheduled. The answer of the said C. Few set out at length the deeds of assignment and trust, dated September 26, 1816, and May 30, 1822. The moneys to be received by the Duke of Norfolk, the Earl of Surrey, and James Weld should be held by those. The answer denied that the deeds were contrary to the said letters patent, and denied that the said C. Few or the said E. C. Howard had made any assignment or transfer, to the knowledge or belief of the said Few, which was in any way contrary to the meaning and intent of the said letters patent; and that the said letters patent were not held by more than five persons, and that no trusts had been declared other than by the deeds and assignments set out in the answer; and the answer submitted whether the patents were held in trust for more than five persons. The said C. Few admitted that he had granted several licenses in writing to various persons to use the inventions secured by the said letters patent, such license being subject to certain conditions, and the schedule contained a copy of such licenses. The answer admitted that the said C. Few was in possession of a book containing the names of all licensees, and admitted the possession of various deeds, books, and letters, and memoranda and entries in writing. It admitted that the letters had accumulated since 1812, and were of the most varied nature, and related to various experiments; and that such letters and entries also related to various matters separate and distinct from the inventions for which the said letters patent were taken, and that for such reason the said C. Few was unable to set forth a true schedule thereof, and that many of these letters and documents came into his and his partner's hands as the solicitor and solicitors of the parties interested, and therefore he submitted that he ought not to be called on to produce such documents or letters, or even set forth a list thereof. The answer also stated that he was, and had at all times been, ready and willing to produce and admit the execution of

the various deeds of assignment, and also the terms and conditions of the various licenses granted under the said letters patent, and also the names of all persons to whom such licenses were granted. In a further answer the said C. Few set out all account-books, accounts, letters, copies and extracts of entries.

A motion was made on behalf of the Messrs. Guppy to the Vice-Chancellor for the production of all the deeds and documents admitted by the schedules of the various answers; no objection was made to the production of the deeds, agreements and licenses, and the Vice-Chancellor held that no other documents in which other persons might be interested, either as clients or *cestui que trusts* of Mr. C. Few, ought to be produced. Against this an appeal was made to the Lord Chancellor (Lyndhurst), and he directed that all those documents which related to the assignments and licenses should be produced, since the bill only related to the assignments and licenses.

Messrs. Guppy prayed that the original cause might be re-heard, because no directions were given to produce at the trial any deeds and documents other than the several deeds and documents in the pleadings mentioned, and did not secure a full discovery, and did not give the said Messrs. Guppy leave to file such bill or bills as they might be advised for compelling discovery. The cause was re-heard, and several applications made to the court against the decision of the Master.

The Messrs. Guppy then applied to the Lord Chancellor (Cottenham) to vary his order with a view to direct the production of certain other documents, or that Messrs. Guppy might be permitted to file a supplemental bill of discovery against Mr. C. Few, for the production of documents, as they might be advised, to aid them in making a defence to the action.

Lord Chancellor COTTENHAM. If a plaintiff comes and asks discovery as to one particular point, and obtains all the documents relating to that point, he cannot have a discovery as to all other points to which any docu-

ments in the possession of the defendant may happen to relate. I entirely agree with Lord Lyndhurst in thinking that the bill of discovery asks for no further discovery than as respects the assignments and the licenses. I think that he granted all the discovery which, according to the frame of the bill, could be given. The question is simply upon the second part of the notice of motion. I have read the bill of discovery, and I am of opinion that it does not go to the whole issue in the cause. The defendants having filed a bill for part of the discovery, and the time having elapsed within which that bill could have been amended, the question is whether they can file another bill of discovery. The first part of the motion having been disposed of, the case is as short as possible. The bill having been filed by a patentee, praying the protection of the court against an alleged infringement of his patents, the defendants, by their answers, put in issue his title to the patents, alleging that they were originally invalid, and also by subsequent transactions that they have become void. The cause coming on for hearing, the court takes the course which it is very common to take, namely, it retains the bill for a certain period, giving the plaintiff liberty to bring an action. If the court had thought that the validity of the patents was not in issue, the decree would have compelled the defendants to admit their validity, but the whole matter being in issue, the decree is in conformity to that state of circumstances ; and in the action the defendant would be entitled to impeach the original validity of the patents, and also to impeach their continuing validity, by showing that subsequent acts had made them void. It is quite immaterial to my present view of the case whether, after the court has directed or given liberty to bring an action, with certain directions as to the admissions to be made and the documents to be produced upon the trial of that action, the defendant can, without leave of the court, file a bill for a discovery in aid of the defence of the action ; because in this case the defendants have adopted that course, and the objection has not been taken by the plaintiff, and the court has acted upon the bill of discovery, by directing the production of certain

documents. The bill of discovery is confined to the alleged forfeiture of the patents by subsequent dealings. In the answers to that bill the plaintiff discovers a great variety of documents, some of which relate to subsequent transactions, and some of which may or may not be material, but which the defendants at law think may be material, with reference to the first part of their case. They failed in obtaining the production of the last-mentioned documents, because the bill is limited in its language to the subsequent transactions. Lord Lyndhurst refused, and I think very properly, to order their production; and the sole question is whether, under these circumstances, this not being a case in which the trial of the action can be delayed, this court will compel the parties to go to trial with a discovery as to part only of the matter in issue. Mr. Few may be able to state a case upon which the court will not compel the production of the documents. The only question is whether the benefit of discovery is not to be extended to all the matters in issue; and, as the validity of the original patents is in issue, whether the Messrs. Guppy are not to have discovery upon the subject of that validity. Without, therefore, giving any opinion as to whether the production of any of the documents in question will be ordered, I think it quite clear that it will not be doing justice to these parties if they are not allowed to have liberty to file a supplemental bill for the discovery of those documents the production of which they have failed to obtain.

BRUNTON *v.* HAWKES.

King's Bench, Trin. T., 1821.

Patent for Several Inventions. New Combination of Parts already in Use. Requisites of Specification. Novelty.

If a patent is taken out for several different things, the entire invention of all is the consideration upon which the grant is made. The consideration is entire, and if it fails in any part, it fails in whole.

This, where the patent was granted for an improvement in the construction of ships' anchors, windlasses, and chain cables—*Held*, that it could not be supported unless there was novelty in each of the inventions.

A machine, each part of which was in use before, but in which the combination of the different parts is new, and a new result produced, good subject-matter for a patent.

The specification must embrace two objects. It must clearly describe,

1. The nature of the invention.
2. The manner in which it is to be performed.

Motion for a new trial.

The proceedings on the trial previously had are reported at p. 327.

See specifications and drawings, there.

The grounds for the present motion were that there was not sufficient novelty in the invention, so far as it related to the chain-cables, which consisted only in making the stays wider at the ends, so as to give more extended support to the sides of the links to what was given by Brown's patent chain-cables; and that the mode of making anchors was old.

In support of the patent, and in opposition to the rule for a new trial, it was now contended that, supposing either part of the invention was new and useful, that would support the patent. The merit of the plaintiff's patent for chain-cables consisted in this, that the inventor had so combined his link and stay as to make the link continue in its form and to give the greatest strength. The link and stay were so united together as that the former would never alter its form without rupture, and that had never occurred. The invention did not consist in the form of the link or the form of the stay, although if either were altered the invention would be destroyed. If the stay were pointed it would operate unfavorably, therefore the broad-ended stays were used. If the links were twisted as formerly it would not have its full play; if it were circular it would be changed in form into an oval when strained in use, therefore the great utility of the combination of the particular form of link with the broad-ended stay described in the specification. Then, with regard to the anchor, the mode pointed out in the specification had never before been applied to the

manufacturing of ships' anchors. It was true that the mode had been applied to that which, from the poverty of language, is embraced under the same generic word, viz., to mushroom and adz-anchors; they, however, were never taken on board as ships' anchors; they might, in fact, be called submarine posts. The merit of this part of the patent consists in the first application of that mode of uniting the several parts of ships' anchors; and supposing that this part of the invention should be held not to be new, that would not interfere with the validity of the patent for the other articles. The Crown, by its prerogative, might in the same patent grant three estates in three different counties. If from some circumstance the grant were void as to one estate, it by no means followed that it would be void as to the other two.

ABBOTT, C. J. It is not without great reluctance that my mind has at length come to a conclusion which, as far as my judgment goes, will have the effect of avoiding this patent. It appeared in evidence at the trial that the mode of making cables and anchors, introduced by the plaintiff into general use, was highly beneficial to His Majesty's subjects; and I should wish that he who introduced it might be entitled to sustain the patent. Upon a full consideration of all the arguments that have been addressed to us, and a view of the patent, the specification, and the evidence given at the trial, I feel myself compelled to say that I think so much of the plaintiff's invention as respects the anchor is not new; and that the whole patent is therefore void. The mode of joining the shanks to the flukes of the anchor is to put the end of the shank, which is in the form of a solid cylinder, through the hollow and conical aperture, and it is then made to fill up the hollow, and to unite itself with it. Now, that is precisely the mode by which the shank of the mushroom-anchor is united to the mushroom-top, by which the shank of the adz-anchor is united to its other parts. It is, indeed, the mode by which the different parts of the common hammer, and the pick-axe also, are united together. Now, a patent for a machine each part of which

was in use before, but in which the combination of the different parts is new, and a new result produced, is good, because there is a novelty in the combination. But here the case is perfectly different: formerly three pieces were united together; the plaintiff only unites two; and if the union of these two had been effected in a mode unknown before, as applied in any degree to similar purposes, I should have thought it a good ground for a patent; but unfortunately the mode was well known and long practised. I think that a man cannot be entitled to a patent for uniting two things instead of three where that union is effected in a mode well known and long practised for a similar purpose. It seems to me, therefore, that there is no novelty in that part of the patent as affects the anchor; and if the patent had been taken out for that alone, I should have had no hesitation in declaring that it was bad. Then, if there be no novelty in that part of the patent, can the plaintiff sustain his patent for the other part, as to the mooring-chain? As at present advised, I am inclined to think that the combination of a link of this particular form with the stay of the form which he uses, although the form of the link might have been known before, is so far new and beneficial as to sustain a patent for that part of the invention, if the patent had been taken out for that alone. But inasmuch as one of the things is not new, the question arises whether any part can be sustained. It is quite clear that a patent granted by the Crown cannot extend beyond the consideration of the patent. The king could not, in consideration of a new invention in one article, grant a patent for that article and another. The question, then, is whether, if a party applies for a patent, reciting that he has discovered improvements in three things, and obtains a patent for these three things, and in the result it turns out that there is no novelty in one of them, can he sustain his patent? It appears to me that the case of *Hill v. Thompson* (*ante*, pp. 299, 304), which underwent great consideration in the Court of Common Pleas, is decisive upon that question. In that case the patent was granted to the plaintiff for the invention of certain improvements in the smelting and working of iron; and the Court

of Common Pleas appeared to have considered that the improvement introduced by the plaintiff into what may properly be called the smelting of iron was the obtaining iron from that cinder and slag which before had been thrown away as refuse, and that that might be considered as new. It appeared, however, that the plaintiff claimed further the merit of having discovered that the application of lime in certain stages of the process would cure a disease common to all iron, not merely to that which he was to produce, but to iron originally manufactured from the fresh ore. Now, it turned out that that was not a discovery ; for the application of lime to iron made from the cinder originally used in making the ore was known and practised before. No two things can be more distinct in their nature than the obtaining of iron from a material from which it was impracticable to obtain it before, and the cure or prevention of a disease to which all iron was subjected. In that case, however, the Court of Common Pleas held that, admitting there was novelty in the one, yet, as there was no novelty in the other, the patent was wholly void. The only difference between that case and this is that here the plaintiff, instead of saying that he has made certain improvements, states the improvements ; but still he claims the merit of having invented improvements in all the three. The patent is granted upon the recital that he has made improvements in all the three and that they are new ; and the consideration of the patent is the improvement in the three articles, and not in one ; for an improvement in only one of them would render the patent bad. The consideration is the entirety of the improvement of the three ; and if it turns out there is no novelty in one of the improvements, the consideration fails in the whole, and the patentee is not entitled to the benefit of that other part of his invention. For these reasons, I am of opinion that this patent cannot be supported. There must, therefore, be a new trial. The plaintiff, if so advised, may then put the question upon record, and take the opinion of a Court of Error.

BAYLEY, J. I think that, in this case, there ought to be a new trial. I have no doubt that if the patent is bad as to

part, it is bad as to the whole. If a patent is taken out for many different things, the entire discovery of all those things is the consideration upon which the king is induced to make the grant. That consideration is entire, and if it fails in any part it fails *in toto*. Upon an application for a patent, although the thing may be new in every particular, it is in the judgment of the Crown whether it will or will not, as matter of favor, make the grant to the person who has made the discovery. And when an application is made for a patent for three different things, it may be considered by the persons who are to advise the Crown as to the propriety of the grant that the discovery, as to the three things together, may form the proper subject of a patent, although each *per se* would not induce them to recommend the grant. It seems to me, therefore, that if any part of the consideration fails, the patent is void *in toto*. Now, in this case, the patent is for the improvement of ships' anchors, and windlasses, and chain-cables or moorings. If it had stood on the subject of the improvement in chain-cables only, the impression on my mind is that the patent would have been good. The improvement in that respect, as it seems to me, is shortly this : so to apply the link to the force to operate on it that that force shall operate in one place, namely, at the end ; and this is produced by having a bar across, which has not the defect of the bar formerly used for similar purposes. The former bars weakened the link, and they were weak themselves and liable to break, and then, if they broke, there might be a pressure in some other parts. Now, from having a broad-ended bar instead of a conical one, and having it to lap round the link instead of perforating it, that inconvenience would be avoided ; and therefore the present impression on my mind as to this part of the case is that the patent might be supported. As to the ship's anchor, in substance, the patent is for making in one entire piece that which formerly was made in two. The two flukes of the anchor used to consist of distinct pieces of iron, fastened to the shank by welding. In the present form the flukes are in one piece, and instead of welding them to the shank, a hole is made in the centre, and the shank

introduced through the hole. Could there be a patent for making in one entire piece what before had been made in two pieces? I think not; but if it could, I think still that this would not be new. In the mushroom and the adz-anchors the shank is introduced into the anchor by a hole in the centre of the solid piece; and in reality the adz-anchor is an anchor with one fluke, and the double-fluke anchor is an anchor with two flukes. After having had a one-fluked anchor, could you have a patent for a double-fluked anchor? I doubt it very much. After the analogies alluded to in argument, of the hammer and pick-axe, I do not think that the mere introducing the shank of the anchor, which I may call the handle, in so similar a mode is an invention for which a patent can be sustained. It is said, in this case, that the mushroom-anchor and adz-anchor are not ships' anchors, but mooring anchors. I think they are ships' anchors; they are not, indeed, such anchors as ships carry with them for the purpose of bringing the ship up, but if the ship is required to be stationary at a particular place, then the common mode of making it stationary is by the mushroom-anchor. The mode adopted to bring a ship containing a floating light to an anchor is by mooring her to one of these mushroom-anchors. That is the description of anchor for a holdfast to the ship. The analogy between the case of the mushroom-anchor and of the adz-anchor is so close to that of the present anchor that it does not appear to me that this discovery can be considered so far new as to be the proper ground of a patent. In reality, it is nothing more than making in one piece what before was made in two, and introducing into this kind of anchor the shank, in the way a handle is introduced into a hammer or pick-axe. I think, therefore, that this not being a new discovery, the patent is wholly void; and that being so, there must be a new trial. The plaintiff may then put the question upon the record, and take the opinion of a Court of Error upon the subject.

BEST, J. I am of the same opinion. In the case of *Hill v. Thompson* (*ante*, pp. 299, 304) the Court of Common Pleas, with great reluctance, came to the conclusion that a patent

taken out too large is not only void for the excess, but void altogether. That case afterward came under the consideration of the Lord Chancellor ; and he is reported to have said, “ In his directions to the jury, the judge has stated it as the law on the subject of patents, 1, that the invention must be novel ; 2, that it must be useful ; and, 3, that the specification must be intelligible. I will go further, and say that not only must the invention be novel and useful and the specification intelligible, but also that the specification must not attempt to cover more than that which, being both matter of actual discovery and of useful discovery, is the only proper subject for the protection of a patent. And I am compelled to add that if a patentee seeks by his specification any more than he is strictly entitled to, his patent is thereby rendered ineffectual, even to the extent to which he would be otherwise fairly entitled. On the other hand, there may be a valid patent for a new combination of materials previously in use for the same purpose, or for a new method of applying such materials. But in order to its being effectual, the specification must clearly express that it is in respect of such new combination or application, and of that only ; and not lay claim to the merit of original invention in the use of the materials.” The case, indeed, does not want that authority ; for in the patent the king states that he grants it upon condition that the specification shall be enrolled in the Court of Chancery for the inspection of the public. According to these terms, therefore, the specification must embrace two objects : it must, 1, clearly describe the nature of the invention ; and, 2, the manner in which it is to be performed. When this case was first presented to my mind, it occurred to me that this was a new combination of old principles, and that the patent was therefore good. I now, however, doubt whether the patent could be supported as to the mooring-chain, for the specification cannot stand as a description of a new combination of known principles : it claims an invention as to a part of it which certainly is not new. I allude particularly to the form of the link. The specification states that the object to be gained is the greatest possible strength from a given

quantity of materials, keeping in mind the direction in which the strain is to be borne. It afterward says that this is to be done by the use of that which is new, viz., by the stay introduced between the links, and which, instead of entering them, embraces their sides. If that alone was to be done, it would be new ; but the specification further goes on to say, "It is evident that, of all the forms and constructions that can be given to a link, that form and construction which shall be able to convert a lateral into an end strain, by yielding support to the opposite sides of the link, is the one that should be preferred." It appears to me that the patentee here first claims the merit of originally using the links in the particular form described in his specification, instead of circular links. Now, there can be no doubt that links of that form had been used long before. Then, as to the anchor, the invention claimed is that he avoids the welding ; but that certainly is not new, because that has been done before, in the case of the mushroom and adz-anchor and the pick-axe. It is said, however, that this invention consists in the application of that which was known before to be a new subject-matter ; viz., that he had for the first time applied to the manufacturing of anchors a mode in which welding was avoided, which, however, had been long practised in other instances to which I have before alluded ; but he does not state that as the ground upon which he had applied for his patent, nor state in the specification that, it being known that the process of welding weakens the anchor, he had first applied to an anchor a mode long practised in the manufacture of other instruments, viz., of making the two flukes of one piece instead of two. If he had so described his process, the question would then arise whether that would be a good ground for a patent. I incline to think, however, that it having been long known that welding may be avoided in instruments of a similar form, the application of that practice for the first time to a ship's anchor cannot be considered a new invention, and therefore that it is not the ground of a patent. It is unnecessary, however, to decide that question in this case, because the patentee has claimed the mode of avoiding

welding as a new discovery. That is not a new discovery ; and he has, therefore, taken out his patent for more than he is entitled to ; and I am of opinion that that avoids the patent *in toto*, for the king is deceived : the patentee is represented to have the merit of inventing two things, whereas he has discovered only one ; and the Crown might have considered the discovery as to both a sufficient ground for granting a patent when it would not have thought so of the discovery of one alone. This has been compared in argument to the case of a grant of lands. If, in the same deed, there were included three conveyances of three distinct estates, on three considerations, one might be set aside and another be good ; but if the grant were upon one consideration which was bad, the whole would be void, because the consideration would fail altogether. Now, the present case is similar to that, because here the consideration to induce the king to grant the patent was the statement made by the plaintiff in his petition, that there had been three inventions, when in fact there had been only two. The united consideration upon which the whole grant was made is therefore void ; and consequently the grant itself is void. I am therefore of opinion that there ought to be a new trial.

Rule absolute for a new trial. No attempt was afterward made to support the patent.

CAMPION v. BENYON.

Common Pleas, July 3, 1821.

Specification and Claim. Effect of Excess.

A patent was obtained for "a new and improved method of making and manufacturing double canvas and sail-cloth with hemp and flax, without any starch whatever." The specification described the invention to consist in an improved texture or mode of twisting the threads, to be applied to the making of unstarched cloth. The proof at the trial showed that the exclusion of starch had been adopted in earlier modes of manufacture. *Held*, such patent was void because taken out for more than the patentee had really discovered.

Ambiguity in the patent itself or in the specification in a material point is

ground for rendering the patent void, *per Dallas, C. J.* In the specification the nature of the invention must be accurately described and the claims of the patentee must be set forth in minute detail, *per Park, J.* The specification must cover and support the patent, *per Burroughs, J.*

Comparison of Campion's patent (April 18, 1813) for a new and improved method of manufacturing double canvas, etc., without starch, with Dempster's patent (August 30, 1803) for improvements in the manufacture of canvas. Campion's condemned, because it embraced in the claim the exclusion of starch, which was previously known.

Rule to set aside a verdict in an action for infringement, or to grant a new trial.

The patent was granted to the plaintiff, dated April 13, 1813, for "a new and improved method of making and manufacturing double canvas and sail-cloth with hemp and flax, or either of them, without any starch whatever." The declaration contained several counts, charging the defendants with making and selling divers large quantities of canvas and sail-cloth, in imitation of the plaintiff's, and using his invention as well as putting it in practice, and counterfeiting and imitating the same, in whole and in part. The defendants pleaded not guilty.

Upon the trial of the cause before Dallas, C. J., the plaintiff gave in evidence the specification of his patent as follows :

"My new and improved method of making and manufacturing double canvas and sail-cloth with hemp and flax, or either of them, without any starch whatever, consists in first spinning the warp yarn either by hand or with the sort of machinery generally used for such purposes, without water or dampness of any kind whatever, afterward properly cleansing and bleaching the same in the best manner, and having made it perfectly dry from that process, placing and working it on a machine similar to those commonly used in cotton manufactories, round the upper bobbins of which machine the same is rolled in single threads, so as that when the said machine is put in motion in the usual manner, the effect thereof is to untwist those threads and take out of them all the twist that was made therein by the operation of spinning, and to twist or interweave two of

them into one thread on to half the number of other bobbins in the lower part of the said machine the reverse or contrary way to that in which the single threads or warp had been before twisted ; by this process the yarn is not so hard twisted as at first, and in the operation of thus reversing the twist the fibres of the flax are so closely united, and are laid or arranged so perfectly level and even in every respect, as to render the warp, yarn or threads much stronger than any double threads are by the usual mode of manufacture with starched chains ; the double threads or warp yarn being thus prepared and twisted together into one chain or warp, the same is thereby preserved from injury while passing through the slay-walk in the subsequent operation of weaving, and thus the necessity of using any starch or substitute for starch whatever, which in the ordinary mode of manufacture is used only for the purpose of uniting the two threads or warp and making them smooth, so as to pass through the slay-walk with facility and without injury, is altogether superseded. The canvas thus manufactured is much more pliant than what is made with starch or in any other manner, and is stronger, not only because its being so very regular and even necessarily makes the stress equal in every part, but because in consequence of their being no starch used in the manufacture, the weight of that material, which is considerable in every web or piece, must be supplied by an additional quantity of warp and woof, and being soft and pliant it will thicken when used, and become of a closer texture without breaking, or running up, or being liable to mildew or turn black. Where hemp is used in the manufacture, I hackle the same with soft soap and a very small proportion of oil, in preference to the entire use of oil, as generally practised, for this preparation lays the fibres as even as oil does, and at the same time counteracts the viscous qualities of the hemp, and with a proper quantity of pearl or potash, assist in bleaching the yarn and obtaining a good color in that process. The advantages of my invention of course extend to canvas made of unbleached yarn, and the only difference in the manufacture thereof is the process of bleaching being then dispensed with."

On the part of the plaintiff it was proved that the old plan of manufacturing double canvas and sail-cloth was by spinning yarn, and putting two threads together, uniting them by starch, then drying them, and weaving them in the common way ; and that the principal inconvenience complained of was damp and mildew, as the starch corroded and spoilt the thread ; that the object of the present patent was to bring the yarn as close together without starch as with it ; and that the plaintiff's process had that effect, and differed from that of the defendants by reversing the twist, which was entirely a new invention, and rendered the canvas much better and more durable than it was by the former method.

The defendants gave in evidence a patent obtained by Mr. Dempster, dated August 30, 1803, for "the invention of certain improvements in the manufacture of canvas or strong cloths of vegetable materials, for sails, tents, packages and other useful purposes," the specification of which was as follows : "Instead of using single yarns not twisted, but glued together with starch or other mucilage, in order to form the warp of the canvas, as is now commonly done, to the great injury of the article, by rendering it liable to spontaneous destruction by mildew, I use twine, composed of two or more yarns of prime materials of equal size and strength, both for the warp and woof, and I am by that means enabled to weave, and I do weave, my canvas without any starch or any other mucilage whatever, and do thereby produce an article nearly twice as strong as common canvas of the same weight and fineness, and with the advantage that its threads have an equal bearing on one another in all directions ; not liable, like the common canvas, to split longitudinally, being much stronger in the cross direction, not capable of rot or mildew, from the presence of mucilage, and extremely durable, because it is subject to no irregular action of sharp cutting threads on its woof, but is only exposed to the fair, slow and gradual wear of its well combined and duly proportioned component parts, which maintain their relative strength to the last."

Witnesses were then called on behalf of defendants to

prove that double canvas and sail-cloth had been continually made without starch since Dempster's patent was taken out ; that the plaintiff's was not a new mode of twisting the threads, but that there was in fact no other method ; that the reversing the original twist was not new, as it had been before universally adopted and known in the earliest times, as on the examination of a wrapper enclosing an Egyptian mummy, the thread of which it was composed was twisted in the same manner, and that so far from the plaintiff's process differing from that pursued by the defendants, they were identically one and the same ; and that if the twist was not reversed, it would not work at all.

The Chief Justice left it to the jury to say, 1, whether the plaintiff's patent was an original discovery for making double canvas and sail-cloth without starch ; and, 2, whether it was a new or improved method of doing that which had been discovered before. They found, 1, that the invention was not new, but, 2, that it was an improved method of making those articles ; and accordingly found a verdict for the plaintiff.

Lens obtained a rule *nisi* that this verdict might be set aside, and a nonsuit entered or a new trial granted, on the grounds, 1, that so far from the plaintiff's invention being new, there was proof that sail-cloth had been manufactured without starch since the patent had been obtained by Dempster, and the exclusion of that article was highly beneficial and of the greatest importance ; 2, that the specification introduced a different invention from that sought to be produced by the patent ; 3, that the patent was too large, as the plaintiff claimed the discovery of making canvas and sail-cloth without starch, whereas that had been known before. They contended that all the plaintiff's witnesses were ignorant of Dempster having obtained a patent, and therefore gave to the former the merit of manufacturing those articles without starch. A patent cannot be taken out for the mere working an article with more skill than another, but there must be a novelty and improvement in the mode of manufacture. It was also proved that the process used by the plaintiff in twisting and reversing the yarn

was similar to that adopted by Dempster. At all events, the specification is ambiguous and equivocal in terms, and renders the patent totally void ; and as the weight of evidence was clearly in favor of the defendants, they are at least entitled to a new trial on the merits.

Vaughan and *Pell* now showed cause. The jury have found that the plaintiff's invention was a useful discovery, and on taking the general merits of the case into consideration, there is no ground for saying that the verdict was against evidence. With respect to the patent having been taken out in larger terms than the invention warrants, the plaintiff does not claim to have made the first discovery of making sail-cloth without starch ; if he had, there might have been some weight in the objection ; but he has merely obtained his patent for a new and improved method of manufacturing it, without the use of that article. The specification, as well as the patent, merely import that he was the discoverer of a new and improved method in the making of unstarched cloths, and not that he was the original inventor. The mode as to the twisting, untwisting and reversing the threads is at all events a new invention, and in which the chief merit of the patent consists ; and Dempster's specification is wholly silent on this point, nor is there any mention there made of his mode of disposing of the original twist. In *Huddart v. Grimshaw* (*ante*, p. 128) a patent was taken out for a new mode of making great cables and other cordage, so as to attain a greater degree of strength therein, by a more equal distribution of the strain upon the yarns ; and it was determined that even where the objects of two grants are substantially the same, they may both be valid if the modes of attaining the desired effect be essentially different ; and Lord Ellenborough there said, " There are common elementary materials to work with in machinery, but it is the adoption of those materials to the execution of any particular purpose that constitutes the invention, and if the application of them be new, if the combination in its nature be essentially new, if it be productive of a new end, and beneficial to the public, it is that species of invention which, protected by the king's patent, ought

to continue to the person the sole right of vending it." Apply that principle to the present case, and the plaintiff will be found to have discovered a new combination of old materials, productive of a new end, and beneficial to the public; for he has specifically pointed out the new mode of texture of the threads, while in Dempster's specification he has merely stated that he uses twine composed of two or more yarns of equal size and strength, both for the warp and woof. [Lord Chief Justice DALLAS. In *Huddart v. Grimshaw* (*supra*) Lord Ellenborough observed that "if, prior to the time of a person obtaining a patent, any part of that which is of the substance of the invention has been communicated to the public in the shape of a specification of any other patent, or is a part of the service of the country, so as to be a known thing, in that case he cannot claim the benefit of his patent." Here, however, the question paramount is, whether the plaintiff has not taken out a patent for more than he can legally claim as his own discovery.] Although sail-cloth might have been made without starch before, still the plaintiff has a right to his patent for his new method of manufacturing it, provided it be an improvement on that obtained by Dempster. The specification is not ambiguous in terms, but points out with clearness and perspicuity the improved method of manufacturing unstarched canvas. The plaintiff's invention need not consist in the using new articles, but in the manufacturing of articles in a different manner than was before known, as the specification imports his discovery to be a new and improved method. The grammatical and legal construction of the whole of the instrument must be the same, and although the patent itself may be ambiguous in its terms, it must be taken together with the specification; on reference to which, it is perfectly clear that the plaintiff claims only a new method of manufacture. By the word "improvement," the plaintiff admitted that starch had been used before, and as the jury have found that the method was new, there is no reason to disturb their verdict.

Lens and *Hallock*, in support of the rule. The main point in this case is reduced to a question of law, viz.,

whether the patent be too large in its terms or not. Although the plaintiff claims only for an improvement, still it must be inferred that he intended to claim the discovery of the rejection of starch, as well as an improvement in the texture of the cloth ; for he has stated it to be an improvement of making canvas and sail-cloth without any starch whatever. If he had merely used the word "starch," it might have been doubtful, as there might have been only a small quantity of that article used ; and had he intended to confine his claim to the discovery of an improved method of weaving the cloth, he should have called his invention "an improvement in the method of making double canvas and sail-cloth without starch." By the word "whatever," it would seem that a small proportion of starch had been previously used, but that the plaintiff had dispensed with the necessity of the use of that article altogether in his improvement ; but it was proved as a fact that the exclusion of it was known and adopted ever since 1803.

A patent must be construed strictly by the court, and in favor of the public ; and if it be ambiguous on the face of it, and the specification is not clear and precise, the effect of the patent will be altogether destroyed. In *Turner v. Winter* (*ante*, p. 43), Ashhurst, J., said that "as every patent is calculated to give a monopoly to the patentee, it is so far against the principles of law, and would be a reason against it, were it not for the advantages which the public derive from the communication of the invention after the expiration of the time for which the patent is granted. It is therefore incumbent on the patentee to give a specification of the invention in the clearest and most unequivocal terms of which the subject is capable ; and if it appear that there is any unnecessary ambiguity affectingly introduced into the specification, or anything that tends to mislead the public, in that case the patent is void." The universal principle in cases of this description is that an *ambiguitas patens* cannot be explained or cured ; while on the other hand an *ambiguitas latens* may. It has been said that, though the patent itself be ambiguous, it may be explained by the specification ; but there also the plaintiff's principal

object seems to have been the exclusion of starch, as he states that the canvas thus manufactured is more pliant than that made with that article, or in any other manner ; that, therefore, leaves the patent equivocal and ambiguous. [RICHARDSON, J. In some specifications, a party expressly points out that he does not claim for certain articles or purposes.] Here the plaintiff has claimed the discovery of the whole of the invention, when he should have confined his right to the improvement or discovery produced by him alone. In the *King v. Else* (*ante*, p. 40) it was held that if an invention consists in an addition or improvement only, and the patent is for the whole machine or manufacture, it is void ; as where a patentee claimed the exclusive liberty of making lace, composed of silk and cotton thread mixed, and not of any particular mode of mixing them ; upon its being clearly proved and admitted that silk and cotton thread had been before that time mixed on the same frame for lace, in some mode or other, the patent was declared void. In the *King v. Arkwright* (*ante*, p. 29) Buller, J., laid down the following, among other rules, that “as to the invention, the rule of law was very different from what it was on the specification ; for as on the specification, if any one part of the invention were not sufficiently described, the patent was void ; so on the invention, if any one part of it be new and useful, that is sufficient to sustain a patent for the particular object of the invention ; but if the invention consists of an addition or improvement only, and the patent goes to the whole machine, it would be a very different question whether such patent could be supported.” In *Hill v. Thompson* (*ante*, p. 299), where the Lord Chancellor ordered a trial at law to try the validity of a patent, his lordship, after the cause had been tried, said that “in his direction to the jury, the judge had stated it as the law on the subject of patents, 1, that the invention must be novel ; 2, that it must be useful ; and, 3, that the specification must be intelligible. I will go further,” observed his lordship, “and say that not only must the invention be novel and useful and the specification intelligible, but also that the specification must not attempt to cover more than that

which, being both matter of actual discovery and useful discovery, is the only proper subject for the protection of a patent. And I am compelled to add that if a patentee seeks by his specification any more than he is strictly entitled to, his patent is thereby rendered ineffectual, even to the extent to which he would be otherwise fairly entitled. On the other hand, there may be a valid patent for a new combination of materials previously in use for the same purpose, or for a new method of applying such materials. But in order to its being effectual, the specification must clearly express that it is in respect of such combination or application, and of that only, and not lay claim to the merit of original invention in the use of the materials. If there be a patent both for a machine and for an improvement in the use of it and it cannot be supported for the machine, although it might for the improvement merely, it is good for nothing altogether, on account of its attempting to cover too much." The same principle was afterward recognized in that case in this court, where it was held that if a patent be taken out for more than is strictly the inventor's own addition or improvement, it is bad. In *Macfarlane v. Price* (*ante*, p. 227) Lord Ellenborough said that "a patentee in his specification ought to inform the person who consults it what is new and what is old, and that such person ought to be warned by the specification against the use of the particular invention;" and in *Cochrane v. Smethurst* (*ante*, p. 228) a patent was considered as having been taken out too extensively, where, a new lamp being the object, the title indicated that the invention was an "improved method of lighting cities, towns and villages," and Le Blanc, J., there said that "it appeared from the specification that the invention consisted in the improvement of an old street lamp by a new combination of parts known before; that the patent therefore was too general in its terms, and should have been obtained for an improved street lamp, and not for a new mode of lighting cities." On these decisions, therefore, as well as on principle, the patent taken out by the plaintiff is void, as it claims the discovery of manufacturing sail-cloth without starch, which had been before made known to the public.

DALLAS, C. J. What is the fair import and meaning of this patent, as compared with the specification, is now the only question for the consideration of the court. It is therefore unnecessary to enter into any other parts of the case. Every patent is a limited monopoly, being an infringement on the rights of the public, and operating as a prohibition to persons in future from adopting the precise mode used by the patentee. Without going into the controversy whether it is politic that such privileges should be granted, or such monopolies exist, it is quite clear that a patent should be in precise and unambiguous terms, and describe with accuracy what the inventor claims as his own, as well as the precise extent of the privileges conferred on him by such patent. If, therefore, there be any ambiguity, either in the patent itself or in the specification, in any material point, it is of itself a ground for rendering the patent absolutely void.

Having premised thus much, it is necessary to see for what purpose the present patent was obtained. I agree with my brother Vaughan that it is an instrument, not merely of a legal, but in some degree of a grammatical construction; and if it can be charged with grammatical ambiguity, it cannot hold out that clear description to the public which every one who reads it might and ought to understand. Let us therefore advert to the terms of the patent itself; it is for "a new and improved method of making and manufacturing double canvas and sail-cloth with hemp and flax, or either of them, without any starch whatever." On looking at this, a common person would think, not simply that it was an improvement in the method of making double canvas and sail-cloth without starch, presupposing that starch had been known before, but that it was an improvement for making them without any starch whatever. From the moment I read the patent, I thought the object of the patentee was to make such canvas or cloth without starch, and that the exclusion of that article was a new discovery, and adopted by him for the first time, nor do I now see any reason to think otherwise. With respect to the specification, it must contain a full and accurate ex-

planation how the means of the patent are to be carried into effect. If there be a departure in terms from the patent, the whole is void ; it must be commensurate with the patent itself, and if it coincides with it in terms, it is open to the same objections as the patent. The specification, after describing the different processes of spinning and twisting the flax and yarn, proceeds in the following words : " And thus the necessity of using any starch, or substitute for starch whatever, which in the ordinary mode of manufacture is used only for the purpose of uniting the two threads or warp, and making them smooth, so as to pass through the slay-walk with facility, and without injury, is altogether superseded, and the canvas thus manufactured is much more pliant than what is made with starch, or in any other manner." It appears that the patentee had the omission of the use of starch always in view. The specification then proceeds to allege the other advantages sought to be derived from not using starch, viz., that " the canvas is stronger, not only because its being so very regular and even necessarily makes the stress equal in every part, but because, in consequence of their being no starch used in the manufacture, the weight of that material, which is considerable in every web or piece, must be supplied by an additional quantity of warp and woof, and being soft and pliant, it will thicken when used, and become of a closer texture, without breaking or running up, or being liable to mildew or turn black." As well, therefore, on the terms of the specification as of the patent itself, I have no doubt but that the claim of the plaintiff is of too extensive a nature ; it is not confined to a new and improved method of making and manufacturing the canvas and sail-cloth either in the weaving or twisting the threads, but of manufacturing them without any starch whatever, which it appears had been done before, and was therefore not a new or original discovery. On this ground, therefore, I am clearly of opinion that the patent in question is void.

PARK, J. I am extremely happy that this case is narrowed to a mere question of law, but I entertain no doubt that the weight of evidence was in favor of the defendants,

so that at all events they would have been entitled to a new trial. Questions of this description involve points of the greatest importance, and it is clear that ingenious men who produce inventions for the exercise of trade, which may be beneficial to the public, have a claim on them for such inventions, and the expense and labor which they may have incurred in the production of such discoveries ; but on the other hand, it is equally important that the inventor should not enjoy a monopoly, but that his invention should be turned to the public account after he has been satisfied for the trouble and expense he may have had in its production. It is therefore required in all cases of this description that in the specification of a patent, the nature of the invention must be accurately and particularly described, and the statement of the claims of the patentee must be set forth in the most minute detail. My Lord Chief Justice thought at the trial, on the first view of this case, as all other persons who might have read this patent certainly would, that the principal part of the plaintiff's invention consisted in manufacturing double canvas and sail-cloth without any starch. In order to ascertain precisely, however, what the patentee meant to claim, it is necessary to look at the specification. Taking it either altogether or in part, it is impossible to read it without supposing that the omission of starch was the principal object that the plaintiff had in view, and the main part of the improvement he intended to claim as his discovery. He might have modified his claim by stating that the exclusion of starch formed only part of his invention, and that his improvement did not solely consist in the rejection of that article ; but in the specification he says that " the necessity of using any starch, or substitute whatever, is altogether superseded ; and that the canvas thus manufactured was much more pliant than what is made with starch, or in any other manner, and stronger, and not liable to mildew or turn black." The patent, too, was taken out for " a new and improved method of making canvas and sail-cloth without any starch whatever ;" that, therefore, is stronger in terms than the specification. Some of the plaintiff's witnesses were not aware that starch had

been before disused ; but those for the defendants proved that double sail-cloth had been made without it by Mr. Dempster in 1803, and for which he had obtained a patent. He stated in his specification that he weaved canvas without starch, or any other mucilage whatever, and that among other advantages it was not capable of rot or mildew from the presence of mucilage, and that it was extremely durable, because it was subject to no irregular action of sharp cutting threads on its woof. Here, if the plaintiff had intended to claim an improved method in spinning and twisting the threads composing the cloth, he might have confined his patent to that alone, and disclaimed the exclusion of starch, as being his own discovery. Comparing the specification, therefore, with the substance of the patent to which it refers, it is impossible that it can be supported, for the patentee has claimed more than the merit of an improvement, as he has stated that he had discovered a new method to make canvas and sail-cloth without starch. In *Hill v. Thompson* (*ante*, p. 299) it was decided that if a patent is taken out for more than is strictly the inventor's addition or improvement, or for discovery when it is merely addition or improvement, it is bad. Although a person may have a patent for an improvement on an old discovery, still if he claims the merit of such discovery for the whole of the manufacture, such patent must be wholly void. As, therefore, it was shown that canvas of this description had been before manufactured without the use of starch, and that the exclusion of that article was known before, I am of opinion that the patent is void, and consequently that the plaintiff is not entitled to recover.

BURROUGHS, J. I am clearly of opinion that the verdict found for the plaintiff is against evidence, but the court are only to look to the law of the case for their decision. All the previous cases, as well as the reason of the thing, show that a patent can only be taken out for a new discovery or improvement ; and it is equally clear that the specification must cover and support the patent. For what purpose does the patent in question appear to have been obtained ? It is stated to be for " a new and improved method of making

canvas and sail-cloth with hemp and flax, or either of them, without any starch whatever." If there be any discovery, it appears from the evidence at the trial, as well as from the specification itself, to consist in a new mode of preparing and twisting the hemp or flax for making the canvas and sail-cloth, and in point of fact the patent should have been taken out for that invention alone. It might then have been good, but instead thereof the plaintiff has described his discovery to consist in an improved method of manufacturing those articles without any starch whatever. The title of the patent, therefore, appears to me to be clearly wrong, and in the specification the exclusion of starch is treated by the plaintiff as the most essential part of his improvement. The king has in fact been deceived in granting the patent to the plaintiff, as he has claimed what was known before, and is consequently not entitled to the discovery or invention he thereby sought to establish.

RICHARDSON, J. If it were necessary to give any opinion as to the weight of evidence produced at the trial, I should feel myself bound to state that the jury had come to a wrong conclusion. But I fully concur with the court in thinking that the plaintiff must be nonsuited, as he has taken out his patent for more than he has invented or discovered. The law is perfectly clear as to this point. If the specification had stated that the plaintiff claimed no merit as to the exclusion of starch, it might, perhaps, have cured the general terms contained in the title of the patent, and rendered it valid. The true and sound principle is that, although on the one hand ingenious persons ought to be protected and rewarded for their discoveries, still, on the other, care must be taken that others, as well as the public at large, must not be restricted from making improvements on that which is still open to their ingenuity, viz., of doing anything which is not peculiar to the immediate process employed by the patentee. Here the patent itself appears to consist of an improvement in making double canvas and sail-cloth without starch. The specification confirms it by referring to the advantages to be derived from the omission of that article in the manufacture of those cloths. That

discovery appears to have been made long since, and therefore the patent cannot be sustained.

Judgment of nonsuit.

The version given in 3 Brod. & B. 5, and in 1 Carp. P. C. 418, of the opinions in this case varies enough from Moore's in matters of detail to warrant giving it entire. It is as follows :

DALLAS, C. J. What is the fair import of this patent as compared with the specification is now the only question for us to decide, it being unnecessary to enter into any other. With respect to patents, every patent being a monopoly, that is, an infringement of public right, and having for its object to give the public warning of the precise extent of the privilege conferred on the patentee, the court (without going into the controversy whether it is politic that such privileges should be conferred or not) is bound to require that such warning should be clear, and actually describe what the inventor claims as his own. If the instrument contain any ambiguity on a material point, that is a ground on which it may be avoided altogether.

Having premised thus much, let us see for what the present patent is granted. It is agreed that the instrument is not altogether a subject of legal, but, in some degree, of grammatical construction ; for if the instrument be chargeable with grammatical ambiguity, it cannot give that clear description which every man who reads may understand. The patent is " for a new and improved method of making and manufacturing double canvas and sail-cloth with hemp and flax, or either of them, without any starch whatever." On reading this, how is a common person to decide ? The discovery claimed is not simply a method of making double canvas and sail-cloth, but a new and improved method ; and in what is this new and improved method stated to consist but in the making the cloth without any starch whatever ? From the time I first read the patent down to the present day, I thought that the object of the patentee was to make cloth without starch. Then as to the specification, if that be different from the patent the whole is void ; if it coincides it is open to the same objection as the patent. But

the specification, after describing the operation of spinning, and after stating that thereby the necessity of using any starch or substitute for starch whatever is superseded, proceeds to allege that "the canvas thus manufactured is much more pliant than what is made with starch or in any other manner; and is stronger, not only because its being so regular and even necessarily makes the stress equal in every part, but because, in consequence of there being no starch used in the manufacture, the weight of that material must be supplied by an additional quantity of warp and woof; and being soft and pliant, it will thicken when used, and become of a closer texture, without breaking, or running up, or being liable to mildew or turn black." Whether we look to the patent or the specification, I have no doubt that the claim of the plaintiff is too extensive; it is not confined to an improved method of weaving the cloth or twisting the threads, but also comprehends another mode of proceeding, which is not a new discovery.

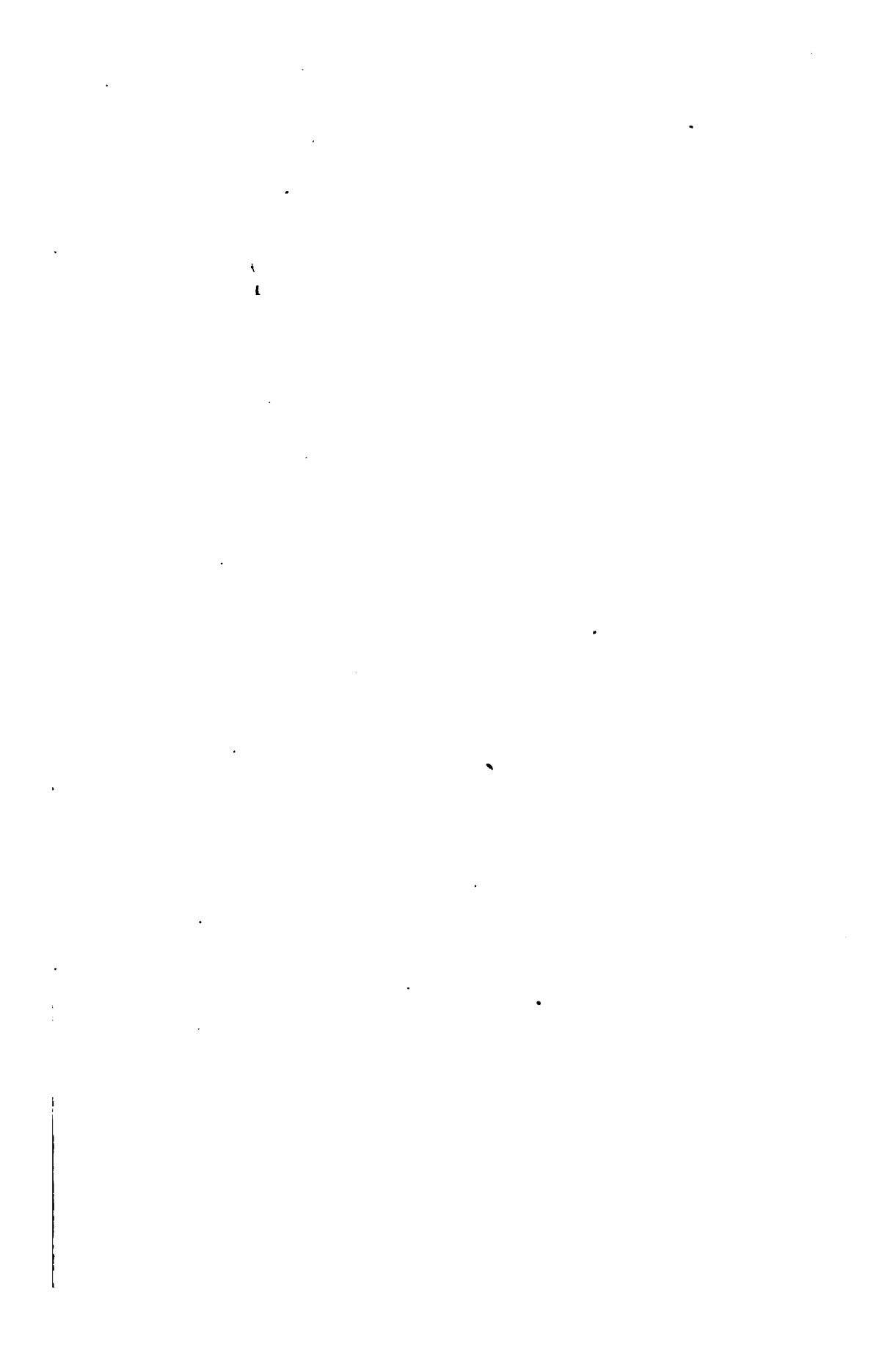
PARK, J. There can be no doubt that ingenious men who incur labor and expense in the production of inventions advantageous to the public have a fair claim to be indemnified by the exclusive privilege of a patent. But, on the other hand, it is important that the public should have the means of turning such inventions to account after the inventor has been satisfied for his trouble; and it is for this reason, among others, that every patent ought to contain a clear statement of what the party has accomplished. An unlettered person who read this patent would conceive that the patentee's improvement consisted in manufacturing sail-cloth without starch. But in order to see with more precision what the party meant to claim, we must look to the specification; and this it is impossible to read without thinking that the omission of starch was the principal part of the improvement which the patentee meant to claim as his own. In his process he tells us the necessity of using starch is superseded, and mildew thereby entirely prevented. But if he only meant to claim as his own an improved mode of texture or twisting the thread, to be applied to the making of unstarched cloth, he might have guarded against ambiguity

by disclaiming as his own discovery the advantage of excluding starch. Proceeding on the specification, it is impossible that this patent can be supported ; for though a patent for an improvement on an old discovery may be sustained, a patent which, in addition to the merit of the improvement, claims the merit of the old discovery, can never be permitted to vest in the patentee an exclusive privilege for the old discovery.

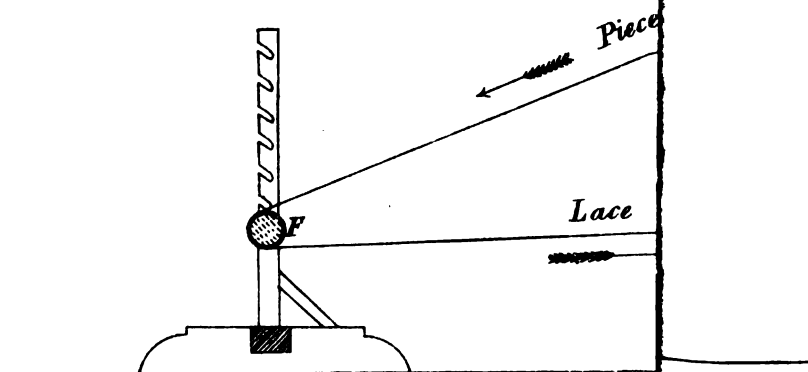
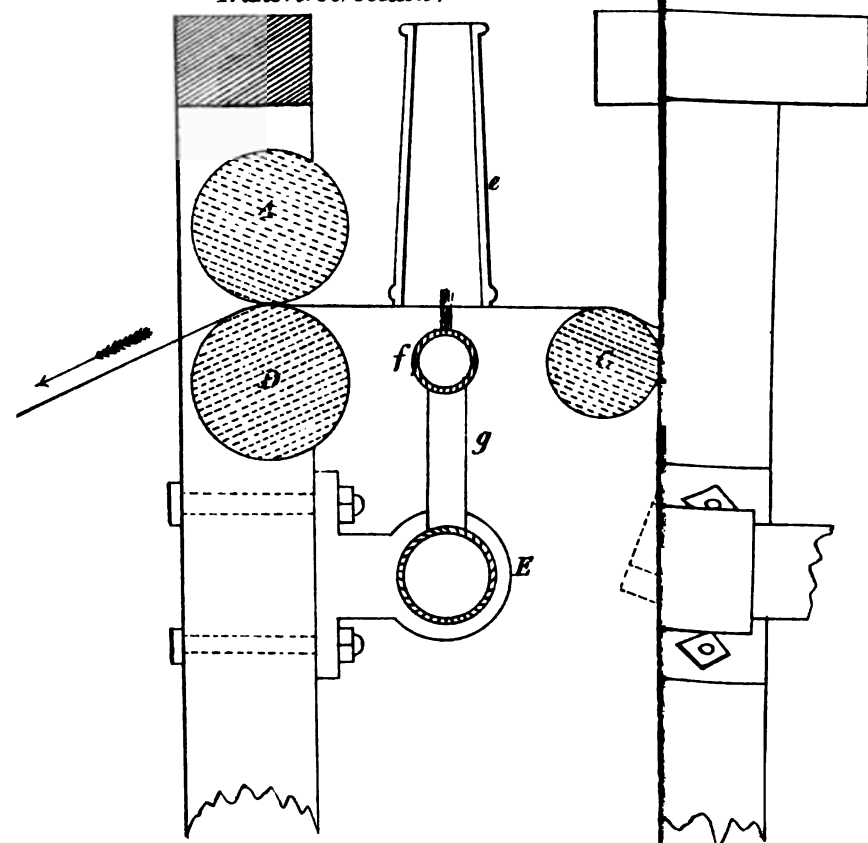
BURROUGHS, J. All the cases and the reason of the thing show that a patent can only be sustained for a new discovery ; and the specification must support the patent. Now, what is this patent for ? "A new and improved method of making and manufacturing double canvas and sail-cloth without any starch whatever." And what has really been the discovery, if it be a discovery ? A new method of preparing or twisting the hemp or flax ; and the patent should have been taken out for that alone. I am clear that this is bad on the title, the patent and the specification. The king has been deceived, and the patent is void.

RICHARDSON, J. The plaintiff must be nonsuited on the ground that the patent is taken out for more than he has discovered. On this point the law is clear. "In some specifications," the party goes on to say, "such things I do not claim." The patent should have been confined to what the patentee could call his own, and it contains something of his own and something of another's ; it is bad because it claims too much. If the specification had guarded against misapprehension on the part of the public by stating that the patentee claimed no merit from the exclusion of starch, it is not impossible but that the patent might have been valid. The principle is that, though ingenious men ought to be rewarded for their discoveries, the public at large and other ingenious men ought not to be restrained from doing whatever is not peculiar to the process employed by the patentee. The specification in this case, from beginning to end, refers to the advantages to be derived from the exclusion of starch in the manufacture of sail-cloth ; and as that is not a discovery which the plaintiff can call his own, the patent cannot be sustained.

Rule for a nonsuit made absolute.



Transverse Section.



Inches 12 9 6 3 0



The enrolled drawing is colored.

Hall's Improvements in the Manufacture of Thread or Yarn, &c.

The object of my Invention is to remove the projecting fibres or ends of fibres from every description of thread or yarn, to which such projecting fibres are injurious or prejudicial; for these ends of fibres, not being bound into or twisted in with the body of the thread, do not contribute to the strength thereof, but they form a kind of fur or wool around the thread, which makes it appear larger or thicker than it really is, because the edge or outline of the thread is not clearly distinguishable by the eye.

My method of improving thread or yarn is by drawing it through or at a very small distance above a body of flame or fire, produced by the combustion of inflammable gas, so as to burn, singe, and destroy as much of the said superfluous fibre or fur as may be removed without injury to the thread. A thread or several threads are drawn by means of some machine, so that every part of such threads shall pass successively through or at a very small distance above the flame, with such velocity of motion as to be acted upon by the flame during its passage, but without continuing the action of the flame so long as to injure the threads. It is obvious that the rapidity of the motion must depend upon the nature of the thread or yarn, and upon the intensity of the flame. It is of course impossible to give any general description of the motion that will be applicable to different cases. A slight trial, however, in each instance will be sufficient to ascertain and regulate the velocity. A regular and uniform motion will of course be most convenient and advantageous. The operation may be repeated twice or more times, according to the nature of the thread; and the repetition may be effected at one operation by passing the thread through or over two or more distinct planes, situate at such distance asunder that the thread will in some measure cool in passing from one to another, so as not to be burned; or otherwise the thread may be passed through or over a single frame, and the operation repeated as often as is necessary. This process will render the thread much more round, even, and smooth, so as to improve the same in respect to its fineness and beauty. The machine for drawing the thread through or over the flame may be constructed different ways to produce the same effect. It will be proper to have two bobbins for each thread; one of these bobbins is to contain the thread which is to be operated upon, and the other is to draw the thread from the former, and to receive it after it has passed through or over the flame. For this purpose, the latter of these bobbins must be turned regularly round by some mechanism to wind the thread upon itself, and to draw it off from the first-mentioned bobbin, which must be so poised upon centres as to turn round when the thread is drawn off from it, but at the same time it must afford such resistance as will draw the thread tight, but not to endanger the breaking of the thread. Part of the thread so extended between the two bobbins must be held

in an horizontal position, or nearly so, and the flame of the gas must be placed in that part, in order that the thread shall pass through the middle of the flame, or at a very small distance above the same, when it winds off from one bobbin to the other. The thread must pass about half an inch or a little more or less above the orifice or orifices at which the gas issues, and in order to produce a current of air and make a perfect combustion of the gas, a small chimney of about four or six inches high may be placed over the flame. When it is required to prepare several threads at once by the same machine, a number of bobbins, such as aforesaid, may be placed in a row, and all turned at once; each bobbin must wind up a single thread and draw the same through or over the flame. The bobbins which give off the thread before it passes through or over the flame will act most advantageously if they are all independant of one another, and only turned by the drawing of the thread. The motion of the thread in passing through or over the flame must be regulated in velocity according to the size and nature of the thread and the intensity of the flame. Before the thread enters into or passes over the flame, it may be drawn between two surfaces covered with woollen cloth, or other substance which is adapted to cause a friction on the thread, and thereby to raise up the ends of the superfluous fibres, so that they will be more readily and completely burned and destroyed by the heat of the flame; or in some cases I employ brushes of hair or bristles, which are fixed on the circumference of a cylinder, and the same is turned round in a direction contrary to the motion of the threads, in order to brush and raise up the fibres; or the said cylinder may be covered with cloth, or with stuff called plush. The apparatus for the production of the inflammable gas may be the same which is well known and in use for the purpose of illumination. The gas is to be conducted in pipes to the machine, and to enter into a tube which is placed horizontally beneath the row of threads, and is provided with small jets or burners to allow the gas to flow out and make a small flame for each thread to pass through or over, as aforesaid. The gas may be admitted into the pipe through a cock to regulate the size of the flame.

The above description will serve to point out the necessary properties for a machine to perform this work; but the machinery to put the bobbins in motion may be constructed in different ways, well known to those who are conversant with spinning or doubling machinery.

To facilitate the execution of my Invention, I have annexed a Drawing of the machine which I employ in my manufactory, and which machine I have found to be conveniently adapted to the purpose.

A, A, are the bobbins which contain the thread which is to be improved; each bobbin is poised upon an iron wire. B, a wooden rail which supports the bobbins; C and D, two other rails over which the threads are conducted to hold them horizontally, or nearly so; the first of these rails C may be covered on the top with woollen cloth, for the purpose of raising the fibres of the thread, as before mentioned. Note, if a revolving brush is employed, it must be situated close to the rail C. E is a tube which conducts the gas from the

gasmeter of the apparatus where it is produced. This tube extends horizontally all the length of the machine, and has small jets in the upper side, as shewn separately, to allow the gas to flow out, and form a flame like the flame of a lamp beneath each thread. The entrance of the gas into the tube is regulated by a cock. *a, a*, are the chimneys, of metal plate, which are supported over the flames by stems; *F, F*, are other bobbins of the same form as the bobbins *A, A*; each one is placed on a vertical spindle *G, G*, so as to turn round therewith. *H* is an horizontal cylinder, which extends the whole length of the machine, and gives motion to all the spindles *G, G*, by small bands; *I*, a pulley upon the axis of the cylinder, which receives an endless band to give motion to the whole machine by means of some mechanical force; or instead of this pulley, a winch or handle may be applied to the axis of the cylinder, to turn the machine by hand, with a fly wheel to regulate the motion. *K* is a toothed pinion on the other extremity of the axis of the cylinder; and *L, M, N*, is the wheelwork, to give a slow motion to the axis *O*, which carries two excentric pieces; *P, Q*, are levers, which bear upon the excentric pieces *P*, and are attached by rods *R* to the arms *r* of the rails *T, T*. These arms are poised on centres, so that the rails *T* can rise and fall according as the excentric pieces actuate them. The rails *T* carry wire crooks *t*, which conduct the threads upon the bobbins *F, F*, to distribute the thread regularly upon all the length of the bobbins. When the thread has been passed once through or over the flame, and the operation is to be repeated, those bobbins *F* which become filled with thread are removed from the spindles *G*, and are made to exchange places with the empty bobbins *A, A*, and then the thread is drawn off from *A*. By this means, in passing over the rail *C* (or over a brush, as aforesaid), the fibres are raised in opposite directions every time the operation is repeated. As the yarn or thread will be somewhat discoloured by the operation, it may afterwards be bleached by any of the processes in common use.

In conclusion, I must observe that my Invention does not consist in any particular form or combination of machinery or apparatus by which the thread is drawn off from one bobbin and wound upon another, nor do I claim the exclusive use of any such machinery or apparatus; but my Invention consists in combining the use of the flame or fire produced by the combustion of inflammable gas with machinery, in such manner that the thread or yarn may be drawn through or over the flame or fire, so as to burn, singe, and destroy as much of the superfluous fibre or fur as may be removed without injury to the thread.

HALL v. BOOT.

King's Bench, N. P., Dec. 17, 1822.*Novelty. Manufacture. Evidence. Joint Liability of Infringers.*

A mode of employing the flames of blazing gas for singeing may be patented if gas has never before been so used, although other modes of producing flames have been employed for the same purpose.

A mode of improving thread or yarn by means of singeing the fabric to remove superfluous threads is patentable under the word "manufacture" in statute 21 Jac. I., c. 8.

Hall's patent, No 4178, dated November 3, 1817, for an improved method of removing superfluous fibres from fabrics of thread or yarn, by singeing them by means of flames of gas, was sustained against the objections that other modes of producing flames had before been used for the same general purpose, and that such a method was not a manufacture.

Trial of an action for infringement.

The patent was granted to the plaintiff, dated November 17, 1817, for a method of improving fabrics of thread or yarn by removing superfluous and loose fibres by means of passing the fabric over a flame of burning gas.

Several manufacturers were called as witnesses for plaintiff, to prove the utility of the invention and the advantage of using gas for singeing lace. By them it was shown that to singe the fibres of lace and other fabrics was not new; hot cylinders and other flames had been used before the patent for that purpose; but the beauty of lace was greatly improved by gassing it, and the fibres were better removed than by any other plan of flame, or otherwise.

The testimony of many scientific men showed that the specification fully described the invention, and might be put into practice by a workman from the information contained in that document. They also testified concerning the former modes of singeing lace and fabrics by flames and hot cylinders, and to the effect that gas appeared peculiarly suited for the purpose; that the use of gas for the purpose was new, and the apparatus, separately, was not the inven-

tion, parts of the apparatus being suitable when using other flames. In order to obtain the effect to the fullest extent, the flame of gas must be urged through the meshes as the chimney described does. Other flames had been urged by blowing, and produced a similar result, though not so well. Oil and other flames will not answer so well as gas. The use of gas allowed of easy regulation as to the intensity of its flame, much more easy than any other flame. This, as well as other causes, made the application of gas highly valuable for the purpose. Evidence was then given by witnesses to prove the infringement by the defendants.

One witness was a bleacher ; was applied to by Jarvis Boot, one of the defendants, to go into partnership with him. He stated that he had a gassing machine, and he could not make use of it for want of being able to bleach. He said he could not carry on the gassing to any extent without being discovered. He said he would still send lace to the plaintiff to be gassed, to keep open his account, as a blind. The defendant showed specimens of gassed lace. Another witness spoke of the quantity of gas supplied by meter to the defendants, which was much greater than any requirement of the burners in the house, which could be seen ; and that part of the premises was enclosed and boarded up. Another witness spoke to getting on the roof of defendants' premises, and taking off tiles, and seeing a machine similar to the plaintiff's, but did not see any flame or gas-pipe. Other witnesses spoke to purchasing gassed lace from defendants. Other witnesses spoke to particular descriptions of lace being sent to the defendants and afterward received back, having all the appearance of gassed lace, which could readily be judged of, and which had not been done at the plaintiff's factory. Other witnesses proved the letting of the house to both defendants, and its being rated in their names.

Gurney, for the defendant, stated that while the destruction of the useless fibres had been effected by flame from other substances, he should not be able to prove that gas has been used. " I state this thus early for his lordship's

consideration, because if his lordship should think the proving that would have no effect upon the subject, it would be a waste of time. His lordship will say whether that will affect the question." [ABBOTT, C. J. I am quite clear it will not.] I state it precisely with that view. [ABBOTT, C. J. Before I make any further observation on the matter, I will hear your proof.] I shall be ready to give evidence upon that subject, to show that flame has been employed before, and that it has effected the purpose. If flame has been employed before, and has effected the purpose, I confess I do not see how Mr. Hall can be entitled to maintain this patent, because he is employing an agent which was not invented by him; the gas he is taking has been in common use, it has been known a considerable time. I submit he cannot be entitled to the monopoly of the use of the flame of gas, because any man who has the use of that may use it as he pleases; nor do I see how he can be entitled to the patent in question. As to the rest of the case, I do not see upon what evidence the verdict is to be obtained against Jarvis Boot; he had commenced a manufactory in another place before he went to the High-pavement; his brother (and co-defendant) had a house there, and before he went there a complete separation was effected, so that they had no communication with one another; and therefore the circumstance of his brother paying for all the gas-lights does not appear to involve him in the consequences of his manufactory; his selling anything that has been gassed by anybody else would not operate against him. It must be the joint act of the two defendants which would entitle this plaintiff to maintain a joint action against them: he has no right to maintain an action against them unless he can show that what was sold was gassed by both in conjunction, and that the act of one was the act of both.

On the part of the defendants some lace was produced singed by various flames, and evidence was given of the previous use of flames for the same purposes.

The Foreman of the Jury prevented the reply.

ABBOTT, C. J. There can be no doubt, gentlemen, your verdict must pass against both the defendants.

Verdict for the plaintiff.

Application was afterward made for a rule to show cause why a nonsuit should not be entered, the invention not being a manufacture under the statute, it was simply the using of one flame for another. The rule was refused, the Lord Chief Justice remarking that no one could know that gas would answer the purpose till he tried, and that a man who tried and succeeded in so improving a manufacture was entitled to a patent.

SAVORY *v.* PRICE.

King's Bench, Dec. 17, 1823.

Patent for Medicine. Requisites of Specification.

A patent for a mixture or combination of known substances, e. g., for Seidlitz Powders, should name the substances. If it only describes modes of making them, instead of giving their familiar names, it is bad.

Trial of an action for infringement.

Action on the case for the infringement of a patent.

The patent, dated August 23, 1815, had been granted for a method of making a neutral salt or powder, possessing all the properties of the medicinal spring at Seidlitz, under the name of "Seidlitz Powder."

The specification enrolled within the time required by the patent set out three distinct recipes, and described the modes and proportions in which the results were to be mixed in order to produce the "Seidlitz Powder."

Recipe No. 1.—Take of subcarbonate of soda, twenty pounds; supertartrate of potash, twenty-four pounds (avoirdupois weight). Dissolve the subcarbonate of soda in twenty-five gallons of boiling water, and add the super-

tartrate of potash ; filter the solution through paper, and evaporate it in a gentle heat until a pellicle appears on the surface, then set it by to crystallize. Re-dissolve the crystals thus formed in six times their weight of boiling water. The solution must again be filtered, evaporated and crystallized, and afterward reduced to a fine powder.

Recipe No. 2.—Take of subcarbonate of soda one hundred pounds, carbonate of ammonia, twenty-five pounds. Expose the carbonate of soda to a heat sufficiently strong to liquefy it, then add the carbonate of ammonia in powder, and with a heat of 212° dry the salt, and pass it through a fine sieve.

Recipe No. 3.—Take of supertartrate of potash one hundred pounds ; mix it with thirty pounds of finely powdered chalk, and add it by degrees to one hundred and sixty gallons of boiling water ; stir it for some time, and when the tartrate of lime has subsided, pour off the supernatant liquor, and wash the residuum repeatedly with cold water. To the tartrate of lime thus formed add thirty pounds of sulphuric acid, previously diluted with eight times its weight of water ; stir the mixture frequently during twenty-four hours, and after having separated the acid from the sulphate of lime by means of strong pressure, evaporate it in Wedgwood's dishes over a sand heat till a pellicle appears on the surface, then set it by to crystallize. These crystals are to be dissolved in boiling water, filtered through white filtering paper, and again crystallized.

Each dose of the Seidlitz Powders consists of two scruples of Recipe No. 3, finely powdered and dissolved in half a pint of spring water, to which are added two drachms of Recipe No. 1, and two scruples of Recipe No. 2 (previously mixed). They must be stirred together, and taken during the state of effervescence.

It was proved that the three products so mixed answered the purpose professed in the patent, and that the combination was new and useful.

But upon cross-examination of the plaintiff's witnesses, the following facts were established. The Recipe No. 1 produced the substance called "Rochelle Salts." Rochelle

Salts were known to the world before 1815 under that name, and also as "Soda Tartarzata."

Recipe No. 2 produced "Carbonate of Soda," which was known before 1815, and was in the Pharmacopœia of 1809; and a more expensive but more perfect way of making it was also known, and it might be bought in the shops.

The Recipe No. 3 produced "Tartaric Acid," the method of making which was known at the time of the patent, and under that or some other name it might be bought in chemists' shops, and other methods of making it were known, all of which would be equally efficacious for the combination of Seidlitz Powders.

Rochelle salts, carbonate of soda and tartaric acid, mixed in the manner prescribed, produced the Seidlitz Powder.

ABBOTT, C. J. It is the duty of any one to whom a patent is granted to point out the plainest and most easy way of producing that for which he claims a monopoly, and to make the public acquainted with the mode which he himself adopts. If a person on reading the specification would be led to suppose a laborious process necessary to the production of any one of the ingredients, when in fact he might go to a chemist's shop and buy the same thing as a separate simple part of the compound, the public are misled. If the results of the recipes, or of any of them, may be bought in shops, this specification, tending to make people believe an elaborate process essential to the invention, cannot be supported. The plaintiff must be called.

Nonsuit.

BARBER *v.* WALDUCK.

BARKER *v.* SHAW.

As to these cases, no materials for a report have been found. There are two allusions:

"In the case of Barber *v.* Walduck, tried at Lancaster in the summer of 1823, before Holroyd, J., which was an action for the infringement of a patent for an improved manner of making hats, the plaintiffs were hat manufacturers,

and the plaintiff's counsel opened a strong case; but his first witness, who was one of the plaintiff's men, proving that he invented the improvement which was the subject of the patent while employed in their workshop, the judge directed a nonsuit. (1 Car. & P. 567.)

"In *Barker and Harris v. Shaw* (cor. Holroyd, J., Lancaster, 1823), which was an action for the infringement of a patent for an improved manner in making hats, one of the plaintiff's men (Thomas Walmsley) whom they called as a witness proved that he himself invented the improvement which was the subject of the patent, while employed in their workshop. The plaintiffs were, therefore, *held* not to be the inventors, and were nonsuited." (Holroyd, Pat. 60.)

Goodeve says (P. C. 32), under the title of *Barker v. Shaw* :

"This case appears to have been cited under the name *Barber v. Walduck* (1 Car. & P. 567). But note that there is a patent of July 26, 1821, No. 4574, to T. Barker (of Oldham, County Lancaster) and J. R. Harris, for "improvements in cleaning furs and wools, used in the manufacture of hats, from kemps and hairs." [But the patentees' names in No. 4574 of 1821 are Barker and John Rawlinson.—Ed.]

WEBSTER v. UTHER.

King's Bench, N. P., Easter Term, 1824.

*Trivial Improvement Patentable. The Doctrine of
"Equivalents."*

A patent for an improvement on the patent percussion gun-lock, by the addition of a bolt, sliding or moving in a groove, by which the roller magazine was then fixed, which had formerly been fastened by a screw and washer, was *held* infringed by a lock having a spring in the bolt; upon the evidence of mechanics that a spring in a bolt was the same thing as a bolt sliding in a groove.

In this case the Lord Chief Justice told the jury that "it was the smallest matter for which I ever knew a patent taken." The invention was called an improvement on the patent percussion gun-lock, and consisted in the addition of a bolt sliding or moving in a groove, by which the roller magazine was then fixed, that had formerly been fastened by a screw and washer. The defendant's lock had a spring in the bolt.

The jury (upon the evidence of sportsmen that the lock with a sliding bolt was more readily used in the field, par-

ticularly in wet weather, than the screw and washer) found that the alteration was a material and useful improvement; and upon evidence by mechanics that a spring in the bolt was the same thing as a bolt sliding in a groove, they found that the defendant had infringed the patent of the plaintiff. The court would not grant a new trial.

It was contended that the question whether the thing was a proper subject for a patent was one of law and not one of fact for the jury.

SYKES v. SYKES.

King's Bench, Nov. 11, 1824.

Stamping. Right to Use "Patent" as a Trade-Mark.

Where a manufacturer had adopted a particular mark for his goods in order to denote that they were manufactured by him, *held*, that an action on the case was maintainable by him against another person who adopted the same mark for the purpose of denoting that his goods were manufactured by the plaintiff, and who sold the goods so marked as and for goods manufactured by the plaintiff.

The declaration stated that defendant sold the goods as and for goods manufactured by the plaintiff; it appeared in evidence that the persons who bought the goods of the defendant knew by whom they were manufactured, but that the defendant used the plaintiff's mark, and sold the goods so marked in order that his customers might, and in fact they did, resell them as and for goods manufactured by the plaintiff. *Held*, that this evidence supported the declaration.

Rule to set aside verdict and grant new trial.

The declaration alleged that the plaintiff, before and at the time of committing the grievances complained of, carried on the business of a shot-belt and powder-flask manufacturer, and made and sold for profit a large quantity of shot-belts, powder-flasks, etc., which he was accustomed to mark with the words, "Sykes' Patent," in order to denote that they were manufactured by him, the plaintiff, and to distinguish them from articles of the same description manufactured by other persons. That plaintiff enjoyed great

reputation with the public on account of the good quality of the said articles, and made great gains by the sale of them, and that defendants, knowing the premises, and contriving, etc., did wrongfully, knowingly and fraudulently, against the will and without the license and consent of the plaintiff, make a great quantity of shot-belts and powder-flasks and cause them to be marked with the words, "Sykes' Patent," in imitation of the said mark so made by the plaintiff in that behalf aforesaid, and in order to denote that the said shot-belts and powder-flasks, etc., were of the manufacture of the plaintiff; and did knowingly, wrongfully and deceitfully sell, for their own lucre and gain, the said articles so made and marked as aforesaid as and for shot-belts and powder-flasks, etc., of the manufacture of the plaintiff; whereby plaintiff was prevented from selling a great quantity of shot-belts, powder-flasks, etc., and greatly injured in reputation, the articles so manufactured and sold by the defendants being greatly inferior to those manufactured by the plaintiff. Plea, not guilty.

At the trial before Bailey, J., at the last Yorkshire Assizes, it was proved that some years since the plaintiff's father obtained a patent for the manufacture of the articles in question. In an action afterward brought for infringing the patent, it was held to be invalid, on account of a defect in the specification; but the patentee, and afterward the plaintiff, continued to mark their articles with the words, "Sykes' Patent," in order to distinguish them as their manufacture. The defendants afterward commenced business, and manufactured articles of the same sort but of an inferior description, and sold them at a reduced price to the retail dealers. They marked them with a stamp resembling as nearly as possible that used by the plaintiff, in order that the retail dealers might, and it was proved that they actually did, sell them again as and for goods manufactured by the plaintiff; but the persons who bought these articles from the defendants for the purpose of so reselling them knew by whom they were manufactured. It further appeared that the plaintiff's sale had decreased since the defendants commenced this business. It was contended for

the defendants that the plaintiffs could not maintain this action, for that one of the defendants being named Sykes, he had a right to mark his goods with that name, and had also as much right to add the word "patent" as the plaintiff, the patent granted to the latter having been declared invalid. The learned judge overruled the objection, as the defendant had no right so to mark his goods as and for goods manufactured by the plaintiff, which is the allegation in the declaration. It was then urged that the declaration was not supported by the evidence, for that it charged that the defendants sold the goods as and for goods made by the plaintiff, whereas the immediate purchasers knew them to be manufactured by the defendants. The learned judge overruled this objection also, and left it to the jury to say whether the defendants adopted the mark in question for the purpose of inducing the public to suppose that the articles were not manufactured by them but by the plaintiff, and they found a verdict for the plaintiff. And now

Brougham moved for a rule *nisi* for a new trial and renewed the second objection taken at the trial, and contended that the facts proved did not support the declaration. The allegation should have been, not that defendants sold the goods as and for goods made by the plaintiff, but that they sold them to third persons, in order that they might be resold as and for goods manufactured by the plaintiff.

ABBOTT, C. J. I think that the substance of the declaration was proved. It was established most clearly that the defendants marked the goods manufactured by them with the words, "Sykes' Patent," in order to denote that they were of genuine manufacture of the plaintiff; and although they did not themselves sell them as goods of the plaintiff's manufacture, yet they sold them to retail dealers for the express purpose of being resold as goods of the plaintiff's manufacture. I think that is substantially the same thing, and that we ought not to disturb the verdict.

Rule refused.

BLOXAM v. ELSEE.

King's Bench, N. P., Jan. 18, 1825.

Requisites of Specification. Drawings. Utility. Assignment for Creditors. Evidence of Ownership of Patent. Invention by Servant of Patentee.

An inventor of a machine is not tied down to make such a specification as, by words only, would enable a skilful mechanic to make the machine, but he is to be allowed to call in aid the drawings which he annexes to the specification ; and if, by a comparison of the words and the drawings, the one will explain the other sufficiently to enable a skilful mechanic to perform the work, such a specification is sufficient.

Trial of an action for infringement.

The declaration consisted of many counts, and the defendant pleaded not guilty. The patent was granted to John Gamble, April 20, 1801, for fourteen years, for an invention communicated to him by a foreigner residing abroad, for "a machine for making paper in single sheets without seam or joinings, from one to twelve feet and upward wide, and from one to forty-five feet and upward in length," to which a specification was enrolled in the proper time, and further letters patent were taken for improvements in June 7, 1807. The periods of these patents were extended by act of Parliament fifteen years after August 14, 1807, thus making the grant for twenty years in all from the first grant ; and the act required that a new specification should be enrolled in order that the machine, in its improved state, should be described. At the trial many objections were made to the patent,—that the patent was assigned to, or held in trust for, more than the number of five persons, which was contrary to the proviso in the letters patent ; that the specifications would mislead ; that much of the second specification was invented by Mr. Donkin for the patentees.

Scarlett, for the defendants, objected that by the assignees having the privilege in question assigned to them in trust for more than five persons, the whole thing was at an end ; as by the sixth section of the act above cited, as well as by the patent itself, if the privilege became vested in, or in

trust for, more than five persons, otherwise than by devise or succession, the whole privilege was to be at an end. Now, the property had become vested in the assignees in trust for more than twenty creditors ; and this being a private act of Parliament, which was to be considered only in the light of a conveyance, the parties must take it with all its imperfections ; and the only two cases in which the Legislature had allowed it to be held by or for more than five persons were pointed out, and this was not either of them ; and unless the words, " otherwise than by devise or succession," were to be considered as surplusage, the construction contended for must prevail. Besides, if the assignees had the right, they could not carry on trade, their trust being to make a dividend of the bankrupt estate ; and could it be contended that if there were one hundred creditors, each might by his own authority grant licenses to paper-makers to use these machines ? [ABBOTT, C. J. The creditors could not do so, but the assignees might.]

Brougham and *Alderson*, on the same side, cited the case of *Hesse v. Stevenson* (*ante*, p. 121), and adverted to the judgment of Lord Alvanley in that case.

ABBOTT, C. J. Whether Lord Alvanley entertained any doubt on this point I cannot tell, but I entertain none ; and I am clearly of opinion that the privilege passes to the assignees.

Several witnesses gave evidence to the sufficiency of the new specification, that the first specification was uncertain and ambiguous, because there were many Gallicisms in it. The French word, *vis*, was used for a screw ; and there was said to be an acclivity of two *centimetre*, and the words *vis de pression* were used for an adjusting screw, which English workmen would not understand ; that the new specification, with the drawings, were fully sufficient for a workman to work from and produce the machinery, and that the patent had been infringed by the defendant.

Mr. Gamble, the patentee, proved that he was, at the time of taking out the patent, acting as trustee for M. Didot, who was a Frenchman.

Scarlett. Do you not know from Messrs. Fourdrinier

that, by a deed between them and Didot, he retains some interest in the patent?

ABBOTT, C. J., overruled this question, stating that the witness could not speak to the contents of the deed unless it was put in.

Mr. Gamble stated that he was acting as trustee to Didot at the time of taking out the patent, and that England was at war with France at that time.

Scarlett. The patent is void, being held in trust for an alien enemy.

ABBOTT, C. J. I will reserve that point.

For the defendant it was contended that the patent was bad in consequence of the uncertainty of the first specification; and evidence was called to show that many of the improvements contained in the second specification were invented by Mr. Donkin, without which the invention was useless. Mr. Donkin, being called, proved these facts, and that he was employed by Messrs. Fourdrinier and Gamble to bring the machine to perfection, was paid by them for so doing, and was acting as their servant.

Attorney-General Copley, in reply, contended that these were the patentees' inventions, and that Mr. Donkin was employed by them to carry their ideas into effect in the best manner.

ABBOTT, C. J. An inventor of a machine is not tied down to make such a specification as by words only would enable a skilful mechanic to make the machine, but he is allowed to call in aid the drawings which he may annex to the specification; and if, by a comparison of the words and the drawings, the one will explain the other sufficiently to enable a skilful workman to perform the work, such a specification is sufficient.

By the sixth section of the act, the new specification is to be taken as a substitute for the former specifications, and if good, that would cure all defects and omissions in the former ones.

Let the jury say whether the invention was useful and whether defendant has infringed.

Verdict for plaintiff.

Upon leave granted to apply to enter a nonsuit a motion therefor was made, the proceedings upon which are reported as the next following case.

BLOXAM *v.* ELSEE.

King's Bench, Jan. 27, 1825, Feb. 3, 1827.

Patent to Alien. Effect of Assignment in Bankruptcy by Patentee. Invention by Employee. Foreign Words.

The restriction contained in some patents and in statutes concerning them, patents which limit the number of persons who may be assignees of any one right to five, is confined to assignments by acts of the patentee and does not apply to an assignment by operation of law, as under a commission of bankruptcy.

A patent was granted upon a specification which described the machine as capable of performing all the operations necessary to the perfection of the proposed invention. On a trial for infringement, it appeared that a second patent was taken out for improvements necessary to the efficient operation of the original machine. *Held*, that the consideration of the first patent having failed, both patents were void.

A patent was taken out for a machine for making paper in single sheets, without seam or joining, from one to twelve feet or upward wide, and from one to forty-five feet and upward in length. *Held*, that this imported that paper varying in width between those extremes could be made by the same machine; and that the patentee, at the time of taking out the patent, not having any machine capable of producing paper of different widths, the patent was void.

Motion for nonsuit on case reserved.

The trial is reported at p. 373.

Scarlett, for the defendant, stated his first ground to be that when Gamble took out the first patent for M. Didot, who was at that time an alien enemy, that fact was not disclosed; it was a fraud on the Crown. [ABBOTT, C. J. We all think this a point worthy of consideration.] The second point is that this privilege could not be assigned for the benefit of more than five persons, under the patent

nor under the private act of Parliament. [BAYLEY, J. Does not the act state that the right shall not be vested in more than five persons or their representatives?] Yes; and that it shall not be held in trust for more than five persons. Now the assignees are trustees for the whole body of creditors, and, in many respects, the assignees do not represent the bankrupt; and the act goes on to add, "otherwise than by devise or succession:" and if, under these words, the right passed to the assignees, it would be a great question whether the assignees could carry on a trade for the benefit of a large body of creditors. The only case on this subject is *Hesse v. Stevenson* (*ante*, p. 121). [ABBOTT, C. J. What do you understand by the words, "or succession" ?] It must be taken to mean coming in as an administrator by succession, in contradistinction from coming in by devise as executor. [ABBOTT, C. J. Looking at the words of the private act, and the reference to 6 Geo. I., and construing the whole of the objects of the Legislature together, I am of opinion that this clause only applies to such assignments as are the act of the party, and does not apply to assignments by act of law.] [BAYLEY, J. This right may go to five persons or their representatives. It was in Messrs. Fourdrinier, who were under the limited number, five, and it passed, by a statutable assignment, to the assignees, who are their representatives.] [HOLROYD, J. I think that the assignees are the representatives of the bankrupts, and that they may sell the right for the benefit of the estate.] [LITLEDALE, J. I am of the same opinion.] *Scarlett*. Another thing to be observed is that the first patent was for a machine to make paper from one to twelve feet wide. Now it appeared from the evidence that without considerable alterations, the same identical machine could not make paper of both those widths, and therefore that patent fails, as the machine will not form what it professed to do; and if the first patent fails, I contend the whole case fails with it. Another head of objection is that four out of five of the improvements mentioned in the second specification were invented by Mr. Donkin. For the plaintiffs, it was contended that he was paid to improve the

machine, and therefore, for that purpose, he was acting as the servant of Messrs. Fourdrinier. In the case of *Barber v. Walduck* (*ante*, p. 368), tried at Lancaster in the summer of 1823, before Holroyd, J., which was an action for the infringement of a patent for an improved manner of making hats, the plaintiffs were hat manufacturers, and the plaintiffs' counsel opened a strong case; but his first witness, who was one of the plaintiffs' men, proving that he invented the improvement which was the subject of the patent, while employed in the workshop of the plaintiffs, the court directed a nonsuit. [BAYLEY, J. Was that person employed by them for the express purpose of devising improvements?] I believe not; but, at any rate, Mr. Donkin was not acting as the servant of Gamble, who is one of the patentees, but of the Fourdriniers only. [ABBOTT, C. J. My present doubt is whether, by the latter part of the sixth section of the private act, the defects (if any) of the earlier specifications are cured by the new one.] I have further to object that the first specification is bad, because there are several words in it not English; such as *vis de pression*, *vis de repulsion*, and *vis de reaction*, for different screws; it was, however, from the drawings annexed to this specification that a skilful mechanic might make the machine; but I submit that as a specification could not be made by drawings alone, it must be made in apt words, intelligible to mechanics; and if this specification were held good, everything mentioned in a specification might be called by a wrong name, and drawings referred to for a whole. Even the scale appended to the drawings was a scale of *pieds* and *pouces*, terms unknown to English mechanics. [ABBOTT, C. J. But it was proved that the names to the scale were quite immaterial; for with relative proportion, which was all that was wanted, the scale would have been as good if there had been no names at all.] If any part of the specification is bad, the whole is so. [ABBOTT, C. J. Some of the points deserve serious consideration.]

The court granted a rule *nisi* for a nonsuit or a new trial, and the case now came on to be argued on the rule for a nonsuit, or for a new trial.

The first objection relied on by the defendant's counsel was that, the patent being in the hands of the assignees, they represented the creditors, and therefore the patent was in trust for more than five persons. The second objection to the validity of the patent was that the patentee, in his petition for a patent, had stated that he was in possession of a machine for making paper in single sheets without seam or joining, from one to twelve feet and upward wide, and from one to forty-five feet and upward in length, the method of making which machine had been communicated to him by a certain foreigner residing abroad. And by the act of Parliament for extending the patents it was enacted, among other things, that every objection which might have been made to the validity of the said letters patent, and to the sufficiency of the specifications enrolled as aforesaid, should be of the like force and effect in law, in any action or suit brought by virtue of that act, as such objections respectively would have been if that act had not been passed; and if, also, the specifications to be enrolled, as required by that act, had been enrolled instead of the former specifications respectively, except only as to the extension of the said privileges for the further term of years hereby granted.

By the seventh section of the act it was provided that if H. Fourdrinier, S. Fourdrinier, and Gamble, their executors, etc., or any person or persons who should at any time during the said term of fifteen years have or claim any right, title or interest, in law or equity, in or to the power, privilege or authority of the sole making, using and vending the said improved machine, should make any transfer or assignment, or pretended transfer or assignment, of the said liberty or privilege thereby vested in H. Fourdrinier, S. Fourdrinier and Gamble, their executors, etc., or any share or shares of the benefit or profits thereof, or should declare any trusts thereof to or for any number of persons exceeding the number of five, or should divide the benefit of the liberty or privileges thereby vested in H. Fourdrinier, S. Fourdrinier and J. Gamble, their executors, administrators and assigns, into any number of shares exceeding the

number of five ; or should do, or procure to be done, any act whatsoever during such time as such person or persons should have any right or title, either in law or equity, which should be contrary to the true intent and meaning of an act of the 6 Geo. I., c. 18 ; or in case the said power, privilege or authority should at any time become vested in, or in trust for, more than the number of five persons or their representatives, at any one time, otherwise than by devise or succession, reckoning executors and administrators as and for the single persons they represent as to such interest as they are or shall be entitled to, in right of such their testators or testator, then, and in every of the said cases, all liberties and advantages whatsoever thereby vested in H. Fourdrinier, S. Fourdrinier and Gamble, their executors, administrators and assigns, should utterly cease, determine and become void, anything therein contained to the contrary thereof notwithstanding.

At the trial the Lord Chief Justice was of opinion that an assignment under a commission of bankrupt was not within the meaning of the act of Parliament, and he overruled the objection. It appeared by the specification of the patent taken out in 1801 that the machine then invented was so constructed as to be capable of producing paper of one definite width only, and in order to vary the width a new machine was required. By the subsequent improvements, however, one and the same machine was capable of producing paper of various widths. It was objected that, as the person who petitioned for the first patent had represented to the Crown that he was in possession of one machine capable of making paper of different widths, which was not true, the first and subsequent patents founded upon it were void.

Scarlett contended that as the first patent was for a machine for making paper in single sheets, without seam or joining, from one to twelve feet and upward wide, and from one to forty-five feet in length, that imported a machine which, at the pleasure of the possessor of it, would make paper from one to twelve feet wide ; and if that were so, then the question which ought to have been left to the jury

was whether the said identical machine for which the first patent was taken out was capable of making paper of different widths. Upon the evidence it clearly was not. Assuming that, by additions, regulations and adjustments not suggested in the specification of the first patent, a machine upon the same principle as that described in the specification might be constructed capable of making paper of different widths, still it was perfectly clear that the identical machine therein described was not capable of making paper of different widths. Now, a patent for a machine is void, if the machine will not answer the purpose for which it is intended without some addition, adjustment or alteration which the mechanic who makes it must introduce of his own invention in order to make it work. (*King v. Arkwright, ante*, p. 42.) But this patent is void upon another ground ; for the interest in the patent became vested in the assignees of the bankrupt in trust for more than five persons. [BAYLEY, J. Are not the assignees of a bankrupt his representatives ?] They are the representatives of the creditors, and not of the bankrupt. The word "representatives" means executors or administrators. The words "otherwise than by devise or succession," if they have any meaning, must import that every species of devolution, except by devise or succession, whereby the privileges granted to the patentee shall become vested in, or in trust for, more than five persons shall be void. That is the true meaning of the clause in the act of Parliament, unless some other word be introduced into it. In *Hesse v. Stevenson (ante*, p. 121) the patentees' interest might, by the terms of the letters patent, be assigned to any number of persons not exceeding sixty. A bankruptcy occurred. It was objected that the interest of the patentees would not pass to the assignees under the commission ; but it was held that, whatever the bankrupt could assign, the assignees would take ; and as the creditors did not exceed sixty, the assignees might take the interest in the patent. The ground of the decision was that the number of creditors did not exceed that mentioned in the act of Parliament. Here the creditors do exceed the number specified in the act.

ABBOTT, C. J. Looking at the act of Parliament, and looking at the usual clause in letters patent, and finding that in each of them there is a reference to the statute, 6 Geo. I., c. 18, and construing the whole clause, either in the letters patent or in the act of Parliament, with reference to that which appears to my mind to be plainly and manifestly its object, it is my opinion that the whole clause is confined to assignments by acts of the party, and does not apply to any assignment or transfer by operation of law, and consequently that it will not apply to an assignment under a commission of bankruptcy.

BAYLEY, J. I have no doubt upon the construction of this clause. I disclaim all right in the court to introduce or exclude words from this clause, but I think we are bound to construe the words which the clause contains, and that is all which I desire to do. The words in this clause are, "In case the power, privilege or authority shall at any time become vested in, or in trust for, more than the number of five persons, or their representatives, at any one time, otherwise than by devise or succession (reckoning executors and administrators as and for the single persons they represent)." There are not only the words, "the number of five persons," but there are the words, "or their representatives;" and those words, "or their representatives," are entitled to have some meaning; and the words, "otherwise than by devise or succession," will apply to the words, "or their representatives," as well as "the number of five persons." Now the question in my mind is, what does the act mean by "their representatives"? If the assignees of a bankrupt are the representatives of a bankrupt, this patent is not vested in them, otherwise than this act of Parliament says it may be vested. It was vested in the Fourdriniers, the bankrupts; if they did not exceed the number of five, the bankruptcy, by a statutable transfer, has made the assignees of the bankrupt the representatives of the bankrupt, and that is the construction which, in my opinion, these words are entitled to receive.

HOLROYD, J. I think that in this case the assignees of the bankrupt are to be considered as the representatives of

the bankrupt, and that they had his property as his representatives, and not as the representatives of the creditors. It appears to me that, under the act of Parliament, the patent is not void, though the creditors may amount to more than five.

LITTLEDALE, J. It seems to me that the words of the act of Parliament do not apply to a transfer by operation of law. The assignees represent the bankrupt by operation at law. It does not appear to me, therefore, that a transfer of the property to the hands of the assignees is at all within the meaning of this clause.

It was contended on the part of the plaintiffs that the recital in the patent did not import that paper of different widths was to be made by one and the same machine, but that any width between one and twelve feet might be obtained by different machines, each adapted and constructed to the width required; that the patent was merely for an invention of such a character, that a machine might be constructed capable of making paper of any width between one and twelve feet.

ABBOTT, C. J. I think one of the objections which has been taken in this case is valid, and must prevail; and consequently it is not necessary to give any opinion upon the others. By the patent it appears that the patentee had represented to the Crown that he was in possession of a machine for making paper in single sheets without seam or joining, from one to twelve feet and upward wide, and from one to forty-five feet and upward in length. Upon this representation the patent is granted. The consideration of the grant is the invention of a machine for making paper in sheets of width and length varying within the limits designated. If any material part of the representation was not true the consideration has failed in part, and the grant is consequently void; and a defendant in an action for infringing the patent has a right to say that it is so. Now, I think it impossible to say that both width and length are not important parts of this representation. It may be that if the representation had mentioned length only, a patent would have been granted for the invention,

which, in its improved state at least, is eminently useful in a very important manufacture, as saving both time and labor in a very considerable degree. But although I may think this probable, I am not at liberty to pronounce judicially that it would have been so. I must therefore see whether the representation was true. It has been contended, in support of the patent, that the recital does not import that paper of different widths was to be made by one and the same machine, but may mean only that the width may be obtained by different machines, each adapted and constructed to the extent required. But I think this construction of the recital cannot be allowed, for it is a different thing whether a manufacturer must supply himself with several different machines, or with one only, capable alone of accomplishing all the purposes to be obtained by many. And if the width is not to be considered as material, the length cannot be so considered; and then the representation will only be that he has invented machines, by the use of several of which paper of various widths and lengths may be made without seam or joining. And this will be at variance with all the specifications, which plainly show that whatever was done was to be done by one and the same machine. Then, if the representation be (as I think it is) that paper of various widths may be obtained by one and the same machine, I must look to the evidence to discover whether the patentee was possessed of a machine, or of the invention of a machine, capable of accomplishing this object. And, unfortunately, the evidence shows that he was not. I say unfortunately, because it is to be lamented that the advantage of great ingenuity, labor, anxiety and expense should be lost to those who have bestowed them. The patentee was at the time possessed of one machine, and one only, and this adapted to one degree of width, and one degree only. And he was not then possessed of any method by which different degrees of width might be manufactured by that machine, or by any other. I think it may be admitted that by subsequent improvements and discoveries a machine was obtained capable of making paper of width varying within certain limits,

though probably not extending to more than half the width mentioned in the patent. The specification enrolled under the act of Parliament appears sufficiently to describe such a machine, and a mode of adjusting it to different degrees of width within the limits of its own breadth. The first specification is evidently confined to one width only. Then, can the last specification be taken to furnish an answer to the objection? Now, supposing the act of Parliament so far substitutes the last specification in the place and stead of the former specifications as to remove all former objections to them, to which the latter is not open, still it cannot so far operate retrospectively as to enable the patentee to say that he possessed in 1801, or had then discovered or invented, a machine which it appears that he did not possess, and had not invented or discovered until a much later date. If the first machine had been capable of working at different degrees of width, though clumsily and imperfectly, the latter machine would have been an improvement of it; but as the first, whether considered as existing actually in theory, was wholly incapable of this, the latter machine does not in this respect furnish an improvement of anything previously existing, but an addition of some new matter not existing or known at the date of the first patent, and which, nevertheless, is therein represented as existing or known, and which cannot but be considered an important part of the representation then made and of the consideration of the grant. If the first grant was void, the subsequent grants by the patent and by the statute must fall to the ground, as having nothing to support them. I think myself compelled, therefore, to yield to this objection. If, however, the law in this respect should not be in the opinion of my learned brothers that which I own it has appeared to me to be, still there must be a new trial, because the question ought to have been left to the jury whether the machine as originally constructed was capable of doing that which the patentee professed it should do, namely, make paper of different widths. I may say that I did not leave that question to the jury because it appeared to me to be clear upon the evidence that the machine, as originally

constructed, would not make paper of different widths. The rule for a new trial must therefore be made absolute.

Thus declaring the patent void.

BRUNTON *v.* WHITE.

King's Bench, Nov. 7, 1825.

Change of Venue.

Venue of action for infringement is not changeable.

Rotch moved to change the venue in this case from London to Lancashire, on the usual affidavit. The cause of action was the infringement of certain letters patent, granted to the plaintiff for an improvement in mechanism.

PER CURIAM. We know of no precedent for this application; and unless some instance is cited in which the court has changed the venue where the cause of action was the infringement of a patent, we cannot grant the present motion.

Rotch said he could not find any authority for the application, and therefore took nothing by his motion.

Rule refused.

REX *v.* HADDEN.

King's Bench, Jan. 19, 1826.

Want of Novelty. Evidence.

Upon the trial of a scire facias brought to repeal a patent for a machine upon the ground of want of novelty, it is proper to show to the witness who has constructed the machine for the same purpose a drawing, although not made by himself, and to ask him whether he has such a recollection of the machine which he made as to say that the paper shown him is the correct drawing of such machine.

Scire facias to repeal a patent.

The patent was granted to the defendant for an improved machine for the roving, preparing and spinning of wool, on the ground that the machine was not new. See specification and drawing.

To prove that the machine was not new, a witness was called, who proved that he had, long before the patent, constructed a machine for those purposes; and to show that it was similar to the defendant's machine, the counsel for the prosecution put into his hand a drawing of the machine the witness had constructed. The drawing, however, was not made by the witness.

The *Attorney-General*, for the defendant, objected that, as the drawing was not made by the witness, he ought not to look at it, but should describe the machine he had constructed, for that this was a lumping way of leading a witness.

Gurney, for the prosecution. Plans are always put into the hands of witnesses who did not draw them.

Scarlett. A plan of a place is certain; but this is exactly the same as if the counsel described a machine, and then said to the witness, Was that what you made?

BAYLEY, J. I think the witness may look at the drawing, and you may ask him whether he has such a recollection of the machine he made as to be able to say that that is a correct drawing of it.

Verdict for the Crown.

KING v. LISTER.

King's Bench, N. P., Jan. 20, 1826.

What constitutes an Infringement.

Lister took out a patent subsequent in date to that granted to Hadden, and which is mentioned in the next preceding case, *King v. Hadden*, for an invention having

the same general purpose as Hadden's. It consisted in applying heat to the fibres of wool by making the wool pass between rollers heated by steam. *Held*, that Lister's patent was an infringement of Hadden's, in which the rollers were heated by iron heaters; and that as both patents claimed the heating of the rollers, and as heating rollers for such purpose was not new Lister's patent as well as Hadden's must be repealed.

KING v. FUSSELL.

King's Bench, N. P., June 20, 1826.

Novelty. False Pretence in Specification. Definiteness of Explanation.

The specification must be so clearly expressed that persons acquainted with the manufacture may say there is no difficulty in determining how the invention should be contrived without experimenting upon it.

Scire facias to repeal patent.

The patent in question was granted to John Fussell, dated August 11, 1824, for an improved method of heating woollen cloth for the purpose of giving it a lustre in dressing. The specification was as follows: "My invention consists in an improved method of applying steam to the heating of woollen cloth (that is to say): After the cloth is properly dressed either by gig machine or by hand-dressing, I roll it upon a hollow roller or rollers, so contrived as to receive or enclose the list or forrel, by which process the stains or wrinkles which are usually produced by rolling the cloth upon the solid roller or rollers in common use are avoided. I then place the cloth on end, for the purpose of shifting as much of the water as is usually shifted previously to racking. In the next place, I submit the cloth to the action of steam for about three hours, more or less, according to circumstances, either by suspending it over water in a common furnace, or by placing it in any apparatus contrived for the purpose,

and capable of receiving one or more rolls of cloth at a time, or by any other convenient and suitable means in which steam is or may be raised in the usual ways, or conveyed into it from a detached or separate generator and applied to the cloth ; or if desirable the steam may be introduced into the roller or rollers, care being taken to prevent the cloth from being strained by the condensed steam from the forrel. The proper temperature of the steam to be applied to the cloth may be stated at considerably below the boiling point, but the exact temperature must be regulated by the judgment of the operator, according to the lustre required, and in some measure also to the capability of the color to withstand a high moist temperature. When it is desirable to give to the cloth a very high lustre it may be obtained by shifting less of the water than is usually shifted previously to racking and raising the steam to a greater degree of heat than required to produce a less degree of lustre. In this case, however, the roller on which the cloth is wound should be made to revolve slowly during the process of steaming by mechanical or other means."

Copley, Attorney-General, for the plaintiff. There were several objections : 1, that the invention was not new, it having been practised by Mr. Wilkins, at Twerton Mills, before the date of the patent, and several witnesses would be called to prove the public working of the invention by steam. The circumstances were these : Mr. Wilkins, having heard of Mr. Daniell's patent for heating rolls of cloth in hot water, imagined that he could accomplish the same end by the use of steam, and that it would be no infringement of Mr. Daniell's patent ; that Mr. Wilkins worked for some time by means of steam ; that a question arose whether he was not infringing Mr. Daniell's patent ; and, upon consulting several eminent counsel, he was advised that the process was, in fact, the same as secured by Mr. Daniell's patent. The consequence was that Mr. Wilkins interested himself in that patent, and ultimately he became a partner of Mr. Daniell, and then used hot water, and not steam. Subsequent to this, Mr. Fussell took out his patent for identically the same thing which Mr. Wilkins had worked ex-

tensively and publicly ; this would be proved by many witnesses. 2. Mr. Fussell's using steam was only a pretence, and not an invention for which a patent could be granted, seeing that Mr. Daniell's patent was for hot water ; that Mr. Daniell's patent process, which was very valuable, consisted of rolling woollen cloth and submitting it to a process of hot water. (See Daniell's specification, *King v. Daniell*, June 13, 1827, p. 393.) Mr. Fussell's specification proposed to roll his cloth on rollers in a wet state, and then place them in a vessel containing water, but he did not immerse the rolls of cloth in the water, but depended on the steam which rose from the water to obtain the requisite heat. It would be evident, therefore, that the water which the cloth contained would become heated by the steam, and the effect produced would be by hot water ; and witnesses would prove that such was the fact, and that the use of steam was difficult to practise and less useful than using hot water. Another objection was that the specification proposed to use hollow rollers, the nature and construction of which it was impossible for any person, however well informed on such subjects, to understand.

Fussell's specification was then put in evidence.

Copley, Attorney-General. I apprehend, upon the very face of this specification, that it is defective in the point to which I before called your lordship's attention. It says : " After the cloth is properly dressed, either by gig machine or by hand-dressing, I roll it upon a hollow roller or rollers, so contrived as to receive or enclose the list or forrel ; by which process the stains or wrinkles, which are usually produced by rolling the cloth upon the solid roller or rollers in common use, are avoided." So contrived as to receive or enclose the list or forrel,—without pointing out the particular construction or the particular contrivance, or how it is to be done ; and I protest at this moment, after having examined it, in conjunction with my learned friends, I have not the least idea of the mode in which it is to be done. It says, " so contrived," without pointing out the mode. I apprehend that that is a fatal objection to this specification.

Scarlett, for the defendant. The objection lies upon the

surface. I have no doubt that men of science will say, the moment a suggestion is made, it is very easily accomplished. The merit is in the suggestion itself.

The *Attorney-General*. To men of science many things may be intelligible, and, by means of their science, they may carry it into effect; but the specification must show how it is to be done. Mr. Brunel might do it one way, Mr. Millington another way. The patentee is bound to say in which way he does it. [ABBOTT, C. J. The particular contrivance is not set out, and from reading it I have not the least notion what it is. But I have great difficulty in saying that I can take upon myself to determine it, because, if persons acquainted with the manufacture would say that there would be no difficulty in saying how the roller could be contrived, that would be sufficient; but if a man must make experiments to ascertain that, it would be insufficient. A patentee is not to put persons on the trial of experiments, he is to tell them how it is to be done.] It is a hollow roller, "so contrived—" [ABBOTT, C. J. "So contrived as to enclose the list or forrel." If the mention of that is sufficient, though I do not understand it, the specification may be good; but if a man is to make experiments, it is not sufficient. The patentee must tell all he knows, and not leave it to conjecture.] So that an ordinary workman may understand it? [ABBOTT, C. J. A person of ordinary skill in such matters. I do not know how it will turn out when you come to call witnesses.] .

Professor Millington was then called, who stated that it was impossible to know what was meant by the specification. He was intimately acquainted with the manufacture of woollen cloth; that the selvages were the longitudinal edges; and that the forrel were the transverse edges or ends of the cloth; that he could not see how a hollow roller could be contrived to enclose the forrel and the selvages; had thought over the subject for many days; had suggested various views on the subject, but all would fail of accomplishing the end suggested by the specification; did not know how to do it now. The witness pointed out how steam heated the water contained in a roll of cloth, and, on

being heated, it would act in the same way as the hot water of Daniell's patent. It would be the hot water which would accomplish the end, not the steam; the steam would act to heat the water, beyond that it would do nothing; and, in fact, the hot water performed the process.

Scarlett, after some cross-examination of the witness. We contend that our patent would be infringed by any invention of a roller that will answer this purpose. We took it out for a hollow roller that would have the effect of enclosing the forrel. If we have failed in that, your lordship will say so. We conceive the patent will be violated by any description of roller to produce that effect.

ABBOTT, C. J. I must say that I consider the specification insufficient. He ought to say how it was contrived. I was willing to wait to see if any person could say it was sufficient. But when a man of science comes and says it would require a great deal of contrivance to make this, I consider it insufficient. It is not for a man to try experiments. It is not for men such as I am, but men of competent skill.

Scarlett. If your lordship puts it upon the construction, in point of law, I am satisfied.

ABBOTT, C. J. That is the way I put it. I put it on the investigation. I apprehend the specification is not sufficient.

His lordship directed the jury to find their verdict for the Crown upon the issue respecting the insufficiency of the specification, and dismissed them in respect to the other pleas.

Verdict for the Crown, declaring the patent void.

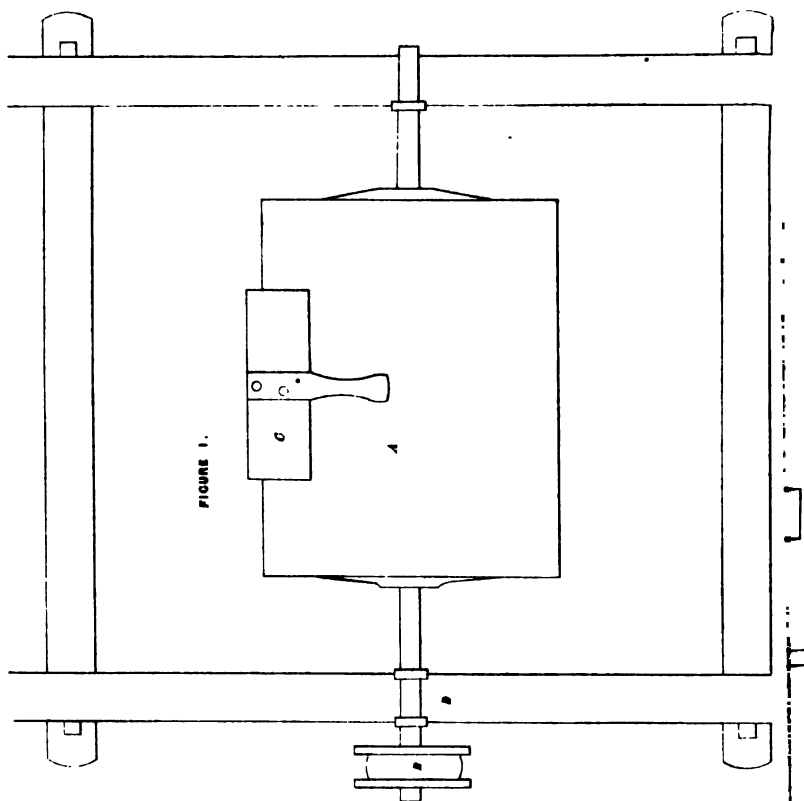
THE KING *v.* DANIELL.

King's Bench, N. P., June 13, 1827.

Novelty. Definiteness of Specification. Extent of Claim.

Daniell's patent for "certain improvements in dressing woollen cloth, also in preparing and using wire cards as applicable to that purpose," *held* void.

Scire facias to repeal letters patent.



Daniel's Improvements in Dressing Woollen Cloths, &c.

These improvements consist of three principles.

The first principle is the grinding or reducing the extremities or ends of the wires or teeth of cards (being implements of trade composed of wire set in leather) used for the purpose of dressing or raising the piles on woollen cloths to a picked point, or reducing them as tending or inclining to a picked point, which I perform by means of a roller fixed on an axletree (see Drawing Fig. 1, letter A,) made smooth and true on its surface; about eighteen inches diameter, and about six inches longer than the longest card required to be pointed or ground. The said roller to be covered with wire card, or, what is by card makers called filletting, such as is used on engines for scribbling wool, which filletting, when fastened by nailing round the said roller so as to cover the surface thereof, I stuff so as nearly to fill the interstices or spaces between the wires or teeth of the said filletting with a mixture of grease and fine gravel, emery, or any other fine sharp gravel. The said roller I set in motion or turn from one hundred to two hundred and fifty revolutions per minute by means of a pulley (see Fig. 1, letter B,) fixed to the axletree of the said roller, and a strap acting on it in the usual manner of driving machinery, or by any other fit mechanical means. The card to be ground or pointed I nail to a board made plain and smooth with a handle fixed to the back part of it to hold it by while grinding, and the extremities of the teeth of the card so nailed I apply (see Fig. 1, C, also Fig. 2) to the filletting which covers the said roller while in motion, exactly in a similar manner as in grinding cards (used for dressing woollen cloth) on a strickle roller, that is, a roller covered on its surface with gravel emery and glue, which is commonly practised by card makers and others. Excepting while grinding I traverse the card a little from side to side. It is necessary, while grinding, to strew a little fine gravel emery over the said filletting every two or three minutes, by which means the teeth of the card will be brought up to a point in less time. Also care must be taken to keep the stuffing or grease and emery in the said filletting soft, so as the extremities of the teeth of the card might easily impress it by applying a little oil or soft grease to it, otherwise the extremities of the teeth of the card will be ground flat or chissel-like, similar to what is produced by grinding on a strickle roller.

The second principle is the applying or using, for the purpose of dressing or raising the pile on woollen cloths in machines called giggs (used in the cloathing manufacture), pointed wire cards or cards with the extremities or ends of their teeth or wires made picked; and the applying or using for the said purpose of dressing or raising the pile on woollen cloths, cards with their extremities or ends of their teeth reduced or made smaller, or tending or inclining to a picked point otherwise than what is produced by grinding cards

on a strickle roller or on a steel roller set on its surface like a file, or on or with a stone, by either of which means the ends or extremities of the teeth of the card would be ground flat, not tending or inclining to a picked point) as is commonly practised. Also, for applying or using for dressing or raising the pile on woollen cloths by hand (commonly called hand dressing) such pointed wire cards, or cards with the ends or extremities of their teeth reduced as before described, or using pointed wire set or fixed in any other substance instead of leather, as applicable to dressing or raising the pile on woollen cloths by hand. Likewise applying or using wire cards for the purpose of dressing or raising the pile on woollen cloths, with their teeth or wires made of greater length than the teeth or wires of cards hitherto used for the said purpose of dressing woollen cloths, which gives them greater elasticity, and will be found necessary when the ends of the teeth or wires of cards are pointed or reduced. In dressing or raising the pile on woollen cloths by the gig I find it best to use the pointed wire card in small pieces about one inch wide, and one and a half inch long, with an allowance of leather for nailing, each piece to contain about one hundred and ten teeth or staples, and each staple or tooth to be made about seven eighths of an inch long, and the leather in which they are to be set of a moderate thickness. The said pieces of cards I nail on boards (see Drawing Fig. 3, Letters a, a, a, a), leaving a space between each piece of card equal to its length, the said boards to be made as long as the cylinder of the gig in which they are to be used, and to be fastened to it by screws, or in the usual manner practised by those who make use of long boards in dressing by the gig; and the parts of the said boards on which the said pieces of card are to be fixed to be made rounding, or of a circular form (see Drawing Fig. 4, b, b, b, b), so that when the said pieces of cards are nailed to it the points of their teeth will form a curve (see Drawing Fig. 4, c, c, c, c), by which means the card will operate more equal on the surface of the cloth. The card may be used in larger pieces, and may be fixed so as to leave less space between each piece, but too great a quantity of card in operation will distress the cloth, and endanger the ground thereof; or it used without any space between the pieces of card so as to form a continuation of card along the board, and without the circular parts on the board, but the board made plain, it would not raise the pile or wool so even on wrinkley cloths. I use about twelve of the said boards on the cylinder at one time, and care must be taken to place or dispose them on the surface of the cylinder of the gig so as for the said pieces of card to operate on the cloth from list to list as equally as possible, otherwise the cloth will appear streaky on the face when finished; if the cloth has too much breasting or clip on the cylinder of the gig, or if the cloth is pressed or strained too tight on the card while in work, it will injure the card and endanger the ground of the cloth. In using or applying pointed wire cards or cards with the extremities of their teeth or

wires reduced or made picked for the purpose of raising the pile on woollen cloth by hand, I find it best to have my cards made about eight inches long, and from two to three inches wide, with an allowance of leather for nailing, the teeth or staples of which to be made about seven eighths of an inch long, and not set so thick or close together in the leather as the teeth are set in cards commonly made use of in dressing by hand; and the leather in which the teeth are set to be of a moderate thickness. The said cards to be nailed to boards similar to those made use of for dressing by hand, and applied to the cloth in the usual way or manner which cards are now used in dressing or raising the pile on woollen cloths by hand, excepting they are to be applied to the cloth more gently, otherwise they will be liable to damage the cloth.

The third principle is the heating woollen cloths after the wool or pile is raised by dressing, and before the cloth is racked or dried, for the purpose of producing a fine and more durable lustre, closing the texture of the cloth, and giving it a soft handle, which I perform by winding the cloth smooth and tight on a roller while it is quite wet after it is finished raising, and the wool smoothly laid on the face; I then put it into a furnace (made of a sufficient length to admit the roller with a cloth on it) and completely cover it with water, which water is to be heated by means of a fire under the furnace in the usual manner. The cloth is to remain in the furnace until it is hot in every part; I then take it out of the furnace and let it get cold before I take it off the roller, when it will be fit to be dried. Care must be taken that the wool on the face of the cloth is not ruffled or disordered in winding on the roller before it is heated.

The following is an explanation of the Drawing to which the above description refers.

Fig. 1, Letter A, the roller on which the filletting is fixed for pointing or grinding the teeth of the cards; B, the pulley fixed on the axletree of roller A, by which it is turned or driven; C, the card fixed to the board, and applied to the filletting on roller A for the purpose of grinding the ends of the teeth to a picked point; D, the frame on which the roller A is placed, and on which it is turned or driven.

Fig. 2 a side section of roller (A, Fig. 1) and the card (c, Fig. 1) shewing the way or direction the roller (A, Fig. 1) turns on its axletree and the direction or inclination of the teeth of the filletting on the said roller, and the direction or inclination of the teeth of the said card while grinding.

Fig. 3 the board on which the pieces of card are nailed, and which is to be fixed to the cylinder of the gig; a, a, a, a, the pieces of card nailed to the board, leaving a space between each piece.

Fig. 4 a section of the board Fig. 3, representing the circular parts b, b, b, b, on which the pieces of card are nailed, and shewing the teeth of the card c, c, c, c.

The patent in question was one granted to Joseph Clisild Daniell, dated July 17, 1819, for improvements in dressing woollen cloth, also in preparing and using wire cards as applicable to that purpose.

See specification and drawings.

On the trial, counsel for the Crown stated objections to the patent to be, 1, that the specification was not sufficient in that the evidence would show that different colors required different degrees of heat; and, 2, that the nature of the wood was not described. Wood was designated to be used for the rollers, but no information was given as to what kind of wood. The principal objection, however, was that the third part of the alleged invention was not new, and had been used twenty years before. A still further objection was that the patent was taken for what was called "three principles," whereas a patent could not be sustained for a principle.

Evidence was adduced to show that the part of the patent which related to pointed wire cards was not new; that the mode of grinding cards had been practised sixteen years, using an emery roller, and bringing the points to a chisel edge; and that the cards had been sold for upward of twelve years.

Other evidence was given concerning the testing, that by boiling the cloth in the manner described in the specification as the third part of the invention, the cloth was marked by the process, and soon became rotten. Testimony was also given that the process with rollers of wood, using deal, had also been tried; and that in this the turpentine boiled out and spoiled the cloth. In practice it was found that different colors of cloth required different temperatures, and it was claimed that this could not be learned from the specification merely.

One witness spoke to having used the process in 1807, and for seven years thereafter, in dressing fine woollen cloths. Also that the process described as the third part of the patent was not new. He himself had used it, at first for an experiment; found that it gave a lustre, and used it afterward for that purpose, and in a large furnace; the

process was not used by others till after the patent. Another witness stated that he used hot water ten years before for fixing the gloss, and it did so ; that the process was very valuable.

On the part of the defendant, the patentee, it was contended that the evidence could not be believed ; that there was a highly valuable invention, so valuable to the trade that, had it been known to one manufacturer before the patent, the use of it must have spread ; it had not done so till the patent.

ABBOTT, C. J., left it to the jury to say whether the invention was new.

Verdict for the Crown.

CROMPTON *v.* IBBOTSON.

Lancaster Lent Assizes, March 20, 1828.

Specification. What Designation of Materials is Sufficient.

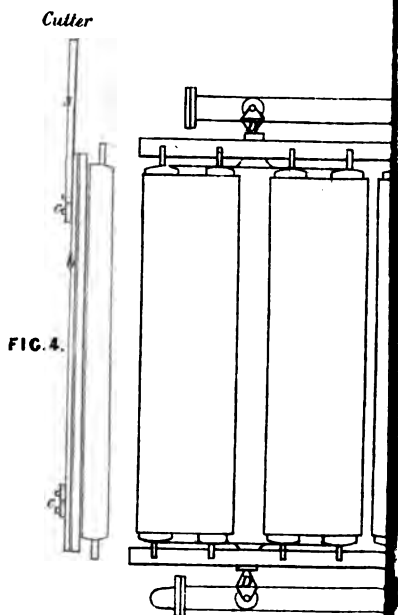
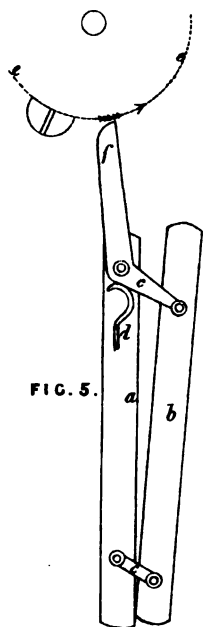
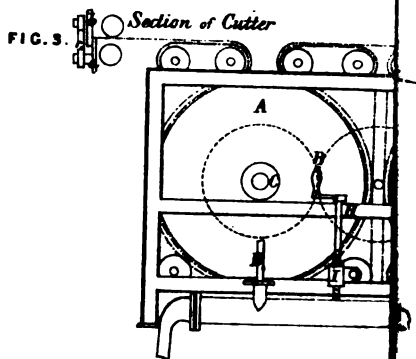
A specification must specify the materials of which the invention is to be composed so distinctly as will deter persons from using materials experimentally which will not answer the purpose.

Trial of an action for infringement.

The patent in question was granted to the plaintiff, Thomas Bonsor Crompton, dated November 1, 1820, for an improvement in drying and finishing paper.

See specification and drawing.

Upon the trial the utility of the invention was admitted. A witness called for the plaintiff stated on cross-examination, and in answer to questions by the judge, that the plaintiff, before taking out his patent, tried various cloths, of cotton, of wool, and of linen, and he had told witness that neither cotton nor linen alone nor woollen alone would answer for conducting paper against heated cylinders to be dried. He further testified that, except for his conversation with the plaintiff, he should not, from his experience, have



A.D. 1820.—N° 4509.

Crompton's Improvements in Drying and Finishing Paper.

The Invention I claim consists in conducting the paper by means of cloth or cloths against the heated cylinders, which cloth may be made of any suitable material; but I prefer it to be made of linen, warp, and woollen weft, which cloth is shewn in the Drawing by the blue lines in Fig. I., and the paper shewn by the red lines in the same Figure, and regulating the rollers for the purpose of preventing the paper from creasing by expansion or separating by contraction. I claim further the application of a pair of shears to cut the paper off in suitable lengths as it comes from the machine or rollers.

DESCRIPTION OF THE DRAWING.

Figure I. is a longitudinal section, and Figure II. a plan of a machine applied to the purpose of drying and finishing paper by steam. A, A, A, A, A, A, are cylinders driven by spur gear, one wheel being fixed upon the axis of each, and having others intervening to connect the whole. The power for driving them to be attached to any of the above wheels, as represented in the dotted circles B, B. C, C, C, C, C, C, are the centers of cylinders, having apertures receiving the valves D, D, D, D, D, D, Figure II., communicating the steam from the pipe into the cylinders, where it becomes condensed, and is carried off by the pipe *a* 2, in Figure II., and D, D, &c. Figure 1. E, E, E, E, E, are rollers attached to the first cylinder, conducting endless cloths, as represented on each by the blue line, Figure 1, covering the whole of the rollers and nearly the cylinders in Fig. 2, carrying along with it the paper, embracing the periphery of the cylinder, until it arrives at the rollers F, F, when the paper leaves the cloth and continues forward to G, G, &c., the rollers of the second cylinders, and so forth to any number of cylinders that may be found requisite. H, H, &c. are screws, with handles acting upon the pivots of rollers I, I, &c., for the purpose of tightening cloth, to prevent the forcible separation of the paper by expansion, or the injurious effects frequently produced by rapid contraction. Fig. III., IV., V., are plan and section of a cutter attached to the extremity of the machine to cut the paper as delivered into sheets of any given size without loss. *a*, a fixed steel blade; *b*, the moveable blade; C, C, the connecting links; *e*, *e*, the tappeted wheel made to act against the link or lever *f*, and bring down the blade *b* to cut off the paper. The wheel makes one revolution for every sheet of paper. *d*, a steel spring sufficient to lift up the blade *b*, instantaneous. The speed of the tappeted wheel is regulated according to the length of the sheet required. Although I have specified with reference to the accompanying Drawing, yet I consider any method of conveying paper over heated rollers or plates, for the purpose of drying paper by means of a conductor or conductors, as well as the application of the shears, to be an infringement on my Patent.

known from the specification whether cotton, linen or woollen would do for the conducting cloth ; he believed that no cloth but linen warp and woollen weft combined would do ; he did not know whether silk would do.

Alderson submitted that the plaintiff must be nonsuited, and cited *King v. Wheeler* (*ante*, p. 317).

Brougham urged that the specification did not mislead. It stated that the patentee preferred cloths of linen and woollen combined, which answered well.

BAYLEY, J. I have no difficulty in this case. If the patentee made certain experiments, and failed in them, he is not to mislead the public by speaking of any cloths, knowing at the same time that certain cloths would not do.

The plaintiff was nonsuited.

CROMPTON v. IBBOTSON.

King's Bench, April 28, 1828.

Specification. Insufficient Designation of Materials.

The specification of a patent contained these words as a specification of the materials to be used : " Which cloths may be made of any suitable material, but I prefer linen warp or woollen weft." The fact was that no other material had been found to answer, though some others had been tried. *Held*, that the specification was bad for want of a sufficiently precise designation of materials.

Motion to set aside a nonsuit.

The trial is reported as the next preceding case, where the specification and drawing are given.

Brougham, for the motion, contended that the important part of the invention consisted, not in the material interposed, but in the mode of applying the paper to the cylinder. If heated cylinders were used alone, as was formerly attempted, the paper became " cockled " or blistered. In the plaintiff's invention a screw was used which tightened it ; thus the gist of the invention consisted in the mode devised for conducting the paper,—conducting it by means of cloths against the cylinders. Now this part of the inven-

tion was set out with great accuracy. There is no dispute that this is new and useful. The court has never gone so far as to say that in a specification every possible negation must be made if a specification enables another person to avail himself of the invention without the necessity of making experiments. Here the objection is founded on the testimony of a single witness, who merely says that other kinds of cloths have been tried which were found not to answer. [BAYLEY, J. Which the plaintiff had tried ?] He stated a conversation between the plaintiff and himself. [BAYLEY, J. He said this : They had tried linen,—that would not do ; he had tried woollen,—that would not do ; that he was not aware whether anything would do except that which the plaintiff used.] He did not say that the plaintiff had said nothing else would do. The learned judge seemed to be of opinion that because the patentee did not state what would not do, so as to prevent persons experimenting, the patent could not be supported. I agree that if the patentee had so described his invention as to require experiment in order to arrive at the result, that such should be the case ; but here the patentee states what he prefers, and that which he prefers is best for the purpose. There is, therefore, no experiment necessary. The patentee, in substance, says, “ I do not say that that is the only material, but that I prefer it, because it fully answers the purpose.” [BAYLEY, J. He says, any suitable material.]

Lord TENTERDEN, C. J. A person would apprehend there were many materials which would be suitable. If he happened not to have cloth made of linen warp and woollen weft, he would have tried some other and have failed. The patentee has not fully and fairly exposed all he knew upon the subject, which he is bound to do. The plaintiff found, after repeated trials, that nothing would serve the purpose except the cloth described in the specification ; yet he says the cloth may be made of any suitable material, and merely that he prefers the particular kind there mentioned. Other persons, misled by the terms of this specification, may be induced to make experiments which the patentee knows

must fail, and the public, therefore, has not the full and entire benefit of the invention. In *Turner v. Winter* (*ante*, p. 43) a patent was held void on the ground of an ambiguity in the specification like the present.

HOLROYD, J. I think his specification should have been according to what he knew on the subject, and not to have stated that it might be done by other materials.

LITTLEDALE, J. I am of the same opinion.

BAYLEY, J. I thought at the trial that it was the bounden duty of a patentee to make a full disclosure to the extent of his knowledge, and that if he knew that any given means would not answer, and yet he included those means in his specification, he was misleading the public and drawing them to the expense of experiment. It was clear, by the evidence of Collins, that the patentee in this case knew that woollen, that linen and that cotton would not do. Before I nonsuited, I put a variety of questions to the witness, who said, "I should not have known, but from conversations with Mr. Crompton, whether woollen cloth would answer or not." "I should not have known what material would or would not have been suitable." "I am not aware any material is suitable but linen and woollen mixed." "I think cotton would not do." "I cannot tell whether silk would." I thought at the trial, and I think so now, that a party knowing that given materials will not answer the purpose, he is bound in his specification so to word it as to prevent parties from trying experiments on that which he knows will not answer.

Rule refused.

Re REDMUND.

Chancery, M. R., July 25, 1828.

Clerical Error in Enrolment of Specification is Amendable.

Petition to amend enrolment of specification.

Letters patent for making and using a certain invention were granted on November 9, 1821, and the specification

was duly enrolled. No office copy had yet been applied for or delivered out.

The patentee stated by a petition that within the last month he had discovered that the copying clerk, in engrossing the specification and the plan annexed to it, had by mistake transposed the numbers by which, in the specification, reference was made to the plan. His prayer was that this clerical error in the enrolment of the specification might be amended.

The Master of the Rolls made the order.

DUVERGIER v. FELLOWS.

Common Pleas, Nov. 26, 1828.

Bond to form a Company of more than Five Persons to work a Patent, Illegal.

Demurrer to pleas.

The action was debt on a bond given for payment, in instalments, of a sum promised for services in the formation of a company to work a patent. The pleas demurred to allege that the parties intended a company of more than five persons, and so the bond involved a corrupt and illegal agreement for an assignment of a patent to more than five persons, which the patent forbade. Best, J., before whom the demurrer was first argued, overruled the demurrer and rendered judgment for defendant. His judgment was affirmed by the King's Bench on error to the Common Pleas, under the same title, *Duvergier v. Fellows*, May 14, 1830; and this judgment was again affirmed in the House of Lords, July 3, 1832. The reports of these judgments, especially that of the House of Lords, give the facts and grounds of decision very fully. In a strict sense the questions involved were not questions in the law of patents.

STURZ v. DE LA RUE.

Chancery, Dec. 24, 1828.

Sufficiency of Specification. Oath on Applying for Injunction.

An invention for giving paper, by the application of a certain composition, such a surface as renders the lines of copper and other plate printing more clear and distinct, may properly be described in a patent as an improvement in copper and other plate printing.

One of the ingredients in the composition was a white substance, imported from Germany, and which could be purchased at one or two color shops in London; the only description or denomination given to it in the specification was, "the purest and finest chemical white lead;" but there was no article known by that denomination in the trade, or in the shops where white lead is usually sold; and the finest white lead which could be obtained would not answer the purpose. *Held*, that the specification was insufficient.

On an application for an injunction to restrain the infringement of a patent the party must swear that, at the time of making the application, he believes that at the date of the patent the invention was new, or had not been previously known or used in this kingdom.

Motion to dissolve an injunction.

An injunction had been obtained *ex parte* to restrain the defendants "from making, printing, engraving, preparing, selling or disposing of, or causing to be made, printed, engraved, prepared, sold or disposed of, any printings, engravings, cards, boards or tablets or other articles made, printed, engraved or prepared according to the invention therein mentioned, or in any part thereof, or otherwise, in infringement of a certain patent" to which the plaintiff claimed to be entitled by assignment from John George Christ, the original patentee.

The patent purported to be granted "for certain improvements in copper and other plate printing." The specification declared that "the nature of the invention consisted in putting a glazed or enamelled surface on paper to be used for copper and other plate printing, by means of white lead and size, whereby the finer lines of the engraving are better exhibited than heretofore, and also in a mode of polishing the said enamel and the impression after it has been drawn from the plate." It continued:

"I first prepare a size made as follows. I take one pound

of clean parchment cuttings, a quarter of a pound of isinglass cuttings, and a quarter of a pound of gum arabic, and put these ingredients all together in twenty-four quarts of clean spring or rain water, and boil the mixture in a common iron or other pot till it is reduced in quantity to twelve quarts, which I then strain through a flannel bag ; the size being thus prepared, I divide it into three portions of four quarts each to one of the said portions, which I designate as No. 1. I add, while the size is at or just under a boiling heat, ten pounds of the finest and purest chemical white lead, previously ground fine, with a little cold water, and stir the whole together while warm until it assumes the appearance of an even-colored fluid, which, when milk-warm and kept stirred, will be fit for use. To another of the said portions, which I designate as No. 2, I add eight pounds of the like white lead in the same manner ; and to the other of the said portions, which I designate as No. 3, I add six pounds of the like white lead in the same manner ; and being thus prepared with these three mixtures, I proceed to apply them to the paper, as follows, that is to say, I lay a sheet of white letter or other paper smoothly on a board, and with a common painter's brush I lay a thin coat of No. 1 evenly over the surface of the paper, and set it aside to dry for twenty-four hours ; at the end of this time I lay a similar coat of No. 2 over the first coat, and in the same manner, and set it aside again for twenty-four hours more to dry as before ; I then lay a similar coat of No. 3 over the other two coats, and again set it aside to dry as before, when the paper will be fit for use ; but if it receive two coats more of No. 3 in the same way as before described, the paper will look the better. It should here be stated that the mixtures should be kept stirred and at a milk-warm heat while in use ; and if it be required to give any tint to the mixture, it should be done by grinding the color with the white lead, as before described, before it is mixed with the size. The surface of the paper having been glazed or enamelled, as before described, is ready to receive the printers' ink or other material from the plate ; and being placed on the press-board, the plate is applied and

the impression drawn off in the usual manner ; but it should be stated that what is called the press-board should for this purpose be made of a plate of cast-iron ground to a perfectly smooth and level surface. The paper, with the impression so drawn off as aforesaid, should be then laid by for twenty-four hours, and at the end of that time placed with the impression downward on a plate of finely polished steel, and passed several times through the press with a strong¹ pressure, which will give to the glazed or enamelled surface of the paper, and also to the impression, its last and highest polish."

The specification claimed "as the said invention, the glazing and enamel hereinbefore described, applied to paper or cardboard in manner also hereinbefore described, for the purpose of copper and other plate printing."

The defendant now moved to dissolve the injunction, on the ground that the alleged patent was void.

Horne, Sugden and Loraine, in support of the motion.

Tinney and Rotch, in opposition.

The first objection made to the patent was that the title did not agree with the specification or describe the alleged invention truly. The patent, according to the title, was for improvements in copper and other plate printing ; the alleged invention related merely to the manufacture of a certain species of paper or cards. It was on a similar ground that patents were held to be void in *Cochrane v. Smethurst* (*ante*, p. 228) and *King v. Wheeler* (*ante*, p. 317). Supposing for a moment the patent to be valid, could it be denied that every person had a right to prepare cards and paper in the very mode described in the specification, provided he did not use such cards and paper for the purpose of plate engraving ?

The answer made to this by the plaintiff was that plate printing was a process, and that the invention claimed by the patentee was an improvement in one or more of the stages of that process. In *King v. Wheeler* the process was misdescribed ; the improvement was not what the patent stated it to be, "in drying and preparing malt," but in the making of beer by means of a new mode of using malt ; and

the patent, supposing there had been no other objection to it than the title, would have been valid if it had been expressed to be "for improvements in the making of beer." In *Cochrane v. Smethurst* the alleged invention did not form a part of a process, and the patent should have been for an improvement in lamps or in the burners of lamps.

Lord Chancellor LYNDHURST. The description in the patent must unquestionably give some idea, and so far as it goes a true idea, of the alleged invention, though the specification may be brought in aid to explain it. The title in this patent is for "certain improvements in copper and other plate printing." Copper-plate printing consists of processes involving a great variety of circumstances: the paper must be of a particular description; before it is used, it must be damped; it must remain damp a certain time, and must be placed in a certain temperature; the plate must be duly prepared and duly applied, and various processes must be gone through, before the impression is drawn off and brought to a finished state. An improvement in any one of those circumstances—in the preparation of the paper, for instance, or the damping of it, etc.—may truly be called an improvement in copper-plate printing. In this case, the principal part of the improvement relates to the preparation of the paper. It is material to the perfection of copper-plate printing that the lines should be as distinct as possible; and if, by adding anything to the surface of the paper, more clearness is given to the lines, that is an improvement in copper-plate printing. Here, however, the improvement extends to other steps of the process as well as to the preparation of the paper. For the specification, though it says that the impression is to be taken off in the usual manner, states that an iron board is to be substituted for a wooden one, and describes a subsequent operation through which the impression is to go.

The second objection was that the substance which was to be mixed with the size was not properly described or denominated in the specification.

The affidavits filed on the part of the defendants stated that application had been made at the shops of the prin-

cipal chemists in London for the purest or the finest chemical white lead, but that none of these chemists knew of or had any such article ; that the purest and finest white lead would not answer the purpose ; that for several years before the date of the patent, the defendant, De La Rue, had made many experiments for improving the surface of paper and cards by applying mixtures of white lead and size, all of which failed ; that since he had read the specification he had repeated the experiments, observing the directions there given, but with as little success as before ; that no preparation of lead known in this country would produce the surface which appeared on the plaintiff's cards ; that, some time ago, the defendant, De La Rue, when travelling on the Continent, met with a white substance, which on trial furnished the enamel which he had long sought for, and, when mixed with size and duly applied, gave to paper a beautiful white surface ; that he had since discovered that this white substance was imported by the plaintiff, and was used by him for putting the last coats of composition on his paper and cards, the previous coats being made of white lead or some other inferior article ; that the defendant, De La Rue, had subjected portions of the said white substance to various trials, from which he was satisfied that it was not the substance known in this country as white lead, though he believed it to be a preparation of lead in combination with other substances ; and that he was confirmed in his opinion by the fact that the white coloring matter imported from abroad, when dissolved, changed litmus-blue test-paper red, whereas no such effect is produced by pure white lead.

The plaintiff swore in reply that the substance used by him in the composition for glazing and enamelling paper and cards was the finest and purest chemical white lead ; that he procured it from Germany ; that it was imported by other persons in this country, particularly by Mr. Ackerman in the Strand and by his son, Mr. Ackerman, in Regent Street ; that it could be bought of them on application for " the finest and purest chemical white lead," which was its proper name, and the only proper name by which it could

be denominated in the English language ; and that it consisted of white lead fined and purified, by chemical process, to the highest possible degree of which its nature was capable.

It appeared further that the substance in question had been bought by one person at the shop of Mr. Ackerman in Regent Street, under the name of "the purest and finest chemical white lead." On the other hand, a person swore that, having gone to the two shops of the Messrs. Ackerman, and inquired for the purest chemical white lead, he was informed by the shopman at the one shop, "that he did not know such a color," and at the other, "that they did not keep it."

Lord Chancellor LYNDHURST. It is a principle of patent law that there must be the utmost good faith in the specification. It must describe the invention in such a way that a person of ordinary skill in the trade shall be able to carry on the process. Here, the specification says that there is to be added to the size certain proportions "of the finest and purest chemical white lead." A workman would naturally go to a chemist's shop, and ask for "the finest and purest chemical white lead." The answer which he would receive would be that there was no substance known in the trade by that name. He would be compelled to ask for the purest and finest white lead ; and, according to the evidence, the purest and finest white lead that can be procured in London will not answer the purpose.

It is said that there is a substance prepared on the Continent which is white lead or some preparation of white lead ; and that by using it in the manner described in the specification, the desired effect is produced. If that be so, the patentee ought to have directed the attention of the public to that circumstance. He ought to have said, "The purest white lead which can be obtained in the shops of London will not do ; but there is a purer white lead prepared on the Continent, and imported into this country, which alone must be used." The "purest and finest chemical white lead" must mean the finest and purest white lead usually gotten in the market for that commodity, unless

the public be put on their guard by a statement that what would be called very fine and pure white lead, in the ordinary sense of the trade, will not answer, but that the white lead used must be of a superlatively pure and fine quality, prepared in a particular way and to be gotten only in a particular place. If the article is not made in this country, but may be imported, it would be necessary to mention that circumstance.

It is said that the description in the specification will be sufficient if the substance is known in the trade by the name of "the purest and finest white lead" or "the purest and finest chemical white lead." But it does not appear that there is any substance generally known in the trade by that denomination.

It is alleged that the substance can be purchased at the shops in London, and two are specified. In point of fact, it has been purchased only at one of those shops; and they are not chemist's shops, but color shops.

It appears to me that this specification does not give that degree of full and precise information which the public has a right to require. In this state of the evidence, therefore, the injunction cannot be sustained.

Sugden urged that the injunction ought to be dissolved with costs; more especially because the plaintiff had not stated in the affidavits on which he obtained it nor alleged in his bill that, to the best of his knowledge and belief, at the time when he applied for the injunction, the invention mentioned in the patent was new, or newly introduced into this country; and he relied upon Lord Eldon's dictum in *Hill v. Thompson* (*ante*, p. 285), "When in future an injunction is applied for *ex parte*, on the ground of violation of a right to an invention secured by patent, it must be understood that it is incumbent on the party making the application to swear at the time of making it as to his belief that he is the original inventor; for although when he obtained his patent, he might have very honestly sworn as to his belief of such being the fact, yet circumstances may have subsequently intervened, or information have been communicated, sufficient to convince

him that it was not his own original invention, and that he was under a mistake when he made his previous application."

The affidavit of the plaintiff stated that by certain letters patent the patentee was authorized to exercise and make use of within England, etc., "a certain invention in the said letters patent recited to have been as it had in fact been, as deponent verily believes, communicated to the said John George Christ by a certain foreigner residing abroad." There was not in the bill, or in the affidavits on which the injunction was obtained, any other allegation as to the originality of the invention, or as to its not having been previously known or used in this country.

Lord Chancellor LYNDHURST. There can be no doubt that, when a party comes for an injunction against the infringement of a patent, he ought to state that he believes, at the time when he makes the application, that the invention was new, or had never been practised in this kingdom at the date of the patent. It is not enough that it was believed to be new at the time the patent was taken out.

The injunction was dissolved with costs.

LEWIS v. DAVIS.

King's Bench, N. P., Jan. 14, 1829.

Novelty. Utility. Evidence to support Patent for Improvement.

To support an action for infringement of a patent purporting to be for an improvement on a former patented invention, the specification of the former patent must be put in evidence.

Patentable utility in the original invention is not necessary to support a patent for an improvement upon it; utility in the improvement is enough.

Where the process of shearing cloth from list to list by means of shears was already known, and that of shearing it from end to end of the piece by rotary cutters was also known, *held*, nevertheless, that a machine for shearing from list to list by rotary cutters was a proper subject of a patent.

Trial of an action for infringement.

FIG. 1. an End View

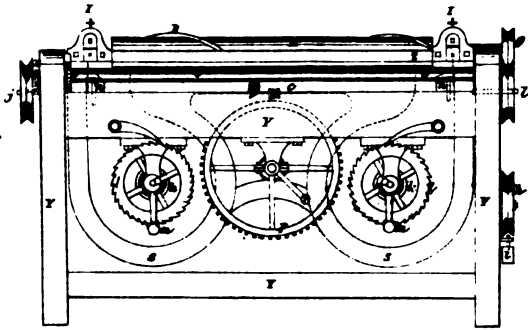


FIG. 4. $\frac{1}{4}$ side

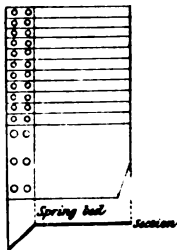
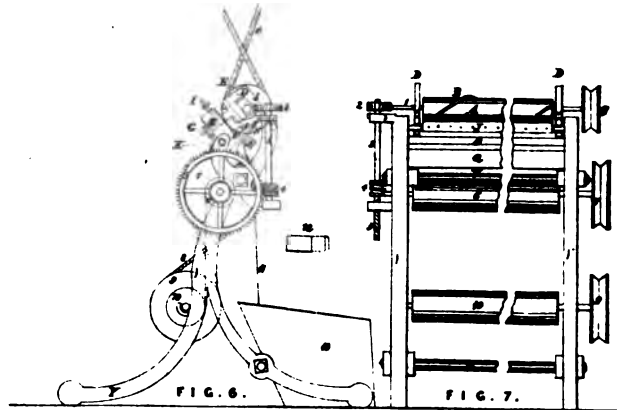
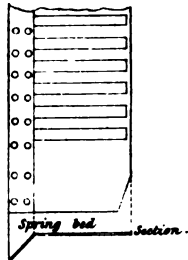


FIG. 5. $\frac{1}{4}$ side



An end view A side view
Scale, $\frac{1}{4}$ inch to a foot

Figure 1 and Fig. 2 are drawn by a Scale of $\frac{1}{16}$ th or $\frac{1}{8}$ inch to Foot

NOTE Figure 1 and Figure 2 represent a machine for shearing Cloth across from list to list

Figure 6 and Figure. 7 represent a machine for shearing Cloth from end to end

Figure 3 represents the carriage, and end view of the cutters J. B.

Figure 4 and Figure 5 are different forms of the Spring-bed.

FIG. 2. a Side View. Scale $\frac{1}{4}$ inch to a foot

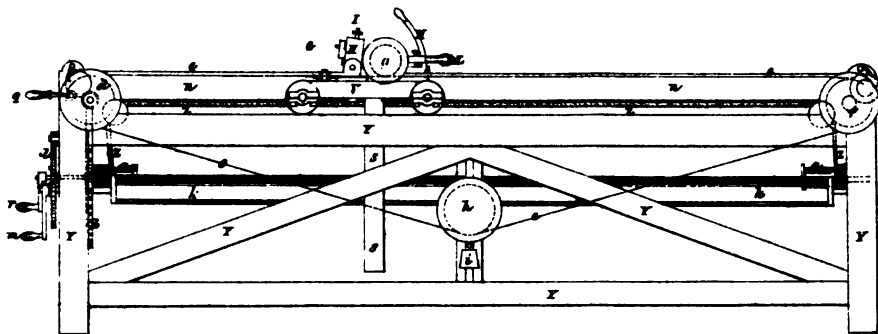
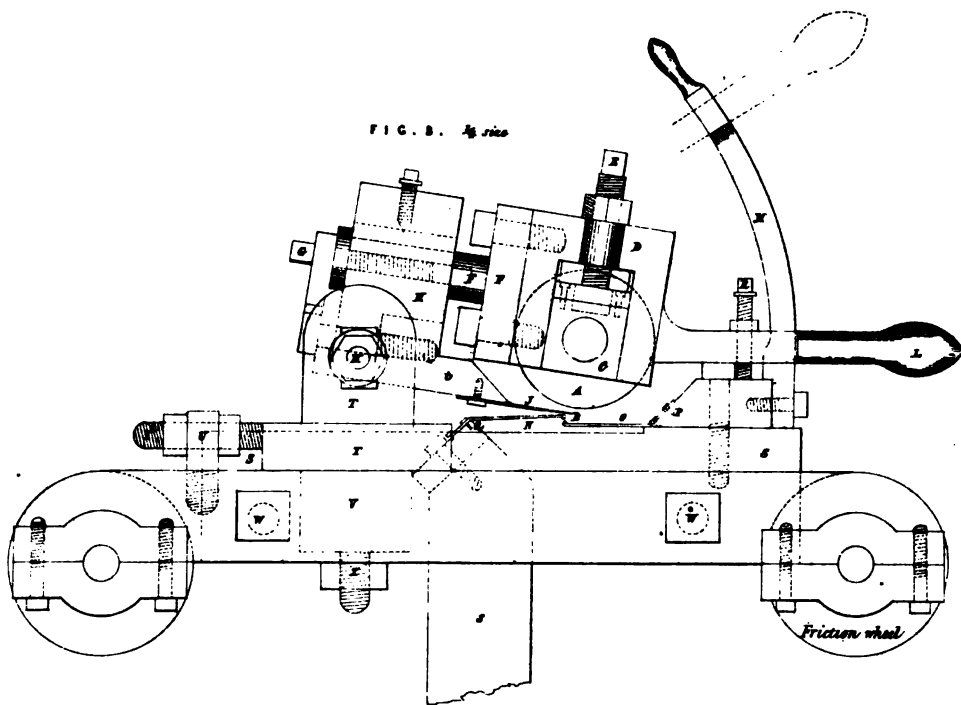


FIG. 3. As seen



J. & W. Lewis & Davis' Improvements in Shearing Woollen and other Cloths.

A is a true cylinder of metal, on which is fixed a triangular steel wire. This wire is previously bent round the cylinder A in the form of a screw, as represented at B in Figure 1, and is hardened. In every Figure of the annexed Drawing the same letters marks the same part of the machinery. The two extremities of the wire B are passed through oblique holes in the ends of the cylinder A, and fastened by nuts screwed on the ends of the said wire, one face of the wire being in contact with the cylinder A. The axis of A turns in sliding pieces C, adjustable in the piece D by the screw E. D is screwed to the pieces F, which are adjustable in H by the screw G, and made fast by the screw I. H turns on fixed centre pins K, which are adjustable in rectangular holes in T, and fixed by nuts. T is adjustable on the carriage V by means of nuts on each side of the pieces U, which are fixed in V, and T is fixed to V by the nut X. V is made fast to S by the screw W. J is a steel blade, hardened and screwed to the metal bar t, which is fixed by screws to H. N and O are a number of thin flat springs of metal fixed to the bars P, Q, which bars P, Q, are made fast by screws to the piece S. The said springs, Figure 4, require to be covered with a thin piece of leather or other suitable substance, to prevent them from catching in any holes or inequalities in the cloth which is intended to be shorn. The springs N, O, may be made in the form represented in Figure 4 or Figure 5, drawn in a plane at right angles to that of Figure 3. L is a part of D, formed into a handle for the purpose of raising J from N by turning the piece H on its centre pins K. The distance of J from N is adjustable by the screw R, which bears on P. A spring M is screwed to P for supporting the handle L by a shoulder when the handle is raised to the place of the dotted lines crossing M. The carriage V is moveable backwards and forwards on the frame Y by the line Z being wound alternately on the rollers or drums a. V is drawn towards f by the worm c working in the teeth of the wheel b, which wheel has a handle r on its axis for the purpose of bringing V back from f to d, the worm c being first disengaged from b by depressing the handle g. The worm c is fixed on the axis of the rigger or pulley d, which is turned round by an endless line e passing round the riggers g, f, b. The axis of b is moveable in a vertical groove in the frame Y, and is drawn downwards by a weight i to give sufficient tension to the endless line e. The axis of the rigger f carries the rigger j, to which the moving power is applied. j turns the axis of f by means of a clutch, and is disengaged when the carriage V arrives sufficiently near to the end of the machine at f, j, by means of a projecting bar fixed and adjustable on V. The rigger g is fixed on the axis of the cylinder A. o is a roller at each end of the machine. A piece of cloth is fastened by the one end to o, and the other end of the said cloth is furnished with a number of hooks for holding, as in the common way, the cloth intended to be shorn. The rollers o are adjustable by the handles x, and fixed by ratchet work. p, k, are two parallel cylinders on which the cloth to be shorn is rolled. They are turned

round by the handles *m*, and fixed as required by the ratchet work *l*. Two parallel bars of wood *n* are fixed by screws at their extremities to the frame *Y* of the machine. The cloth to be shorn is wound on one of the rollers *k*, passed over one of the bars *n*, then between *O*, *N*, and *N*, *J*, and next made fast to a piece of cloth which is fixed to the other roller or cylinder *k*, and brought over the other bar *n*. The lists or edges of the cloth to be shorn are to be fastened to the hooks before described, moved by the rollers *e*. A narrow strip of plush is fixed on the surface of *A*, parallel with the wire *B*, to answer the purpose of a brush for raising up the wool which is to be shorn off the cloth, or instead of the plush bristles may be inserted in the cylinder *A* with similar effect.

The form of the machine now described is for shearing cloth across from list to list. Figures 6 and 7 represent the form of the machine when it is intended to shear cloth lengthwise, or from end to end. The width of the frame *V*, Figure 7, must exceed the width of the widest cloth intended to be shorn. On one end of the axis 1 of the cylinder *A* is a worm turning the wheel 2, and the axis 3, and the worm 4. The worm 4 turns the wheel 5 and the roller 6, which is covered with wire cards. On the axis of the roller 6 is a rigger 7, which turns the rigger 9 by means of an endless line 8 crossed. A roller 10 is fixed on the axis of the rigger 9 to receive the cloth 11 from the card roller 6 after it has been drawn out of the trough 13, and shorn in passing between *O* and *N* and between *N* and *J*. When a considerable part of the cloth 11 is wound upon the roller 10 the line 8 will slip so as to avoid injuring the cloth by too great a degree of tension. The bar *o* in Figure 6 is designed to guide the cloth 11 near to the fixed part of the spring bed, in order that the tension of the cloth shall be as much as possible in the direction of the length of the spring or springs, and consequently that the cloth shall have no power to remove the spring bed from the cutting edges. In order to protect the lists of the cloth 11 from being shorn, two thin pieces or bent plates of metal 12 in Figure 6 are placed by hand on the moveable end of the spring or springs *N*, exactly over each list, the lists being between *N* and the plates 12.

In the machinery which we have now described we claim as our Invention,—

First, the application of the flat springs *N*, *O*, Figure 3, and of the spring or springs *N* and the bar *O* in Figures 6 and 7 for directing and pressing the cloth to be shorn against the cutting edges, so that the strain of the said cloth shall be as much as possible in the direction of the length of the spring or springs *N*, in order that it may have no power to remove the spring bed from the cutting edges.

Second, the application of the triangular steel wire *B* on the cylinder *A*.

Third, the application of a proper substance fixed on or in the cylinder *A* to brush the surface of the cloth to be shorn; and,

Fourth, the described method of shearing cloth across from list to list by a rotatory cutter.

Observe, it is advisable to shear fine cloths from list to list, but as for coarse cloths and for wrong sides in general it will be advantageous to shear them from end to end.

The patent in question was granted to the plaintiffs, John and William Lewis and William Davis, dated January 15, 1818, for improvements on a shearing machine for shearing or cropping woollen or other cloths, for which John Lewis obtained a patent dated July 27, 1815. The new patent claimed, as plaintiffs' invention, 1. The application of the flat spring for directing and pressing the cloth to the cutting edges. 2. The application of the triangular steel wire on the cylinder. 3. A proper substance to brush the cloth. 4. To shear with rotary cutters from list to list, in the manner specified.

See the specification and drawings.

Pollock, for the defendant, in the course of the trial objected that, as the patent in suit was granted for improvements on a former machine also patented, the specification of that machine ought to be produced.

Rotch, for the plaintiffs. That is unnecessary, because the plaintiffs' specification is perfect. Any one who reads that may make the machine without looking to any earlier specification.

LORD TENTERDEN, C. J. When these parties applied to the Crown, in the year 1818, they might have applied for a patent for their invention, without reference to anything that had gone before. Now, that they have not done; on the contrary, they profess to have improved a machine already known. That machine may be used by any one after fourteen years from the earlier patent, but any new matter which is included in the present patent is not open to everybody till fourteen years from a later period. It is therefore material to show what are the improvements contained in the plaintiffs' patent. Now I cannot say what are improvements upon a given thing without knowing what that thing was before; for aught I know, all the things mentioned in the plaintiffs' specification may have been included in the former specification.

The specification of the patent of 1815 was read. That was for a machine with rotary cutters, which were to shear the cloth from end to end.

It appeared that the defendant's alleged infringement of the patent consisted in making a machine with rotary cutters to shear from list to list, but that he had not used either the first, second or third of the improvements stated in the plaintiffs' specification. It was also proved that shearing from list to list by machinery to carry shears was known before the date of the plaintiffs' patent, and also that rotary cutters to shear the cloth from end to end were known before that time. It was proved that the plaintiffs' improvements were all useful.

Pollock, for the defendant. The old mode of shearing was from list to list, by machinery to carry shears in that way. The plaintiffs have combined a rotary cutter, which was a thing well known before, with three other things, which the defendant has not infringed upon. Now I submit that the rotary cutter being old, we had a right to use it in shearing from list to list, which was the old way of shearing by means of shears, though perhaps rotary cutters had only been used in shearing from end to end. The defendant has not infringed on any of the three things which the plaintiffs claim. The plaintiffs have no right to claim the going from list to list as their invention, and we have only sheared in that way with a rotary cutter instead of shears, that species of cutter being old, and not of the plaintiffs' invention.

LORD TENTERDEN, C. J. It is not material whether a machine made under the patent of 1815 is useful or not, as it is shown that the plaintiffs' machine is highly useful. The case stands thus: it appears that a rotary cutter to shear from end to end was known, and that cutting from list to list by means of shears was also known. However, if before the plaintiffs' patent the cutting from list to list, and the doing that by means of rotary cutters, were not combined, I am of opinion that this is such an invention by the plaintiffs as will entitle them to maintain the present action.

Verdict for plaintiffs. Damages, 1s.

In the ensuing term, *Pollock* moved for a new trial on affidavits, but no question was made as to either of the points decided at the trial.

Rule refused.

CROSSLEY v. BEVERLEY.

King's Bench, N. P., Jan. 30, 1829.

General Interpretation of Specification. Utility.

The terms of a specification must be interpreted according to the state of knowledge at the time they were used, and not to be taken to embrace subsequent discoveries.

In the specification of an improved gas apparatus, no direction was given respecting a condenser, which was a necessary part of every gas apparatus. *Held*, that the omission did not invalidate the patent.

Trial of an action for infringement.

The subject of the patent was a gas-machine invented by Samuel Clegg, the letters for which, granted December 9, 1815, No. 3968, "for an improved gas apparatus," were assigned to the plaintiff in this action.

Soon after this patent for a gas-machine was taken out, Mr. Clegg made an improvement on the original invention, by contriving chambers at the centre, whereby a valve, previously necessary, was dispensed with; the gas-meters made according to this improvement entirely superseded the others, and the infringement complained of was the making of these by the defendant.

Scarlett, for the plaintiff. If the invention consists in the serpentine tubes, or the particular modes described in the specification of supplying the gas through the axis, there is no infringement, but these are only the mechanical means, and the plaintiff claims any mode in which the hollow drum or enclosed cylinder may revolve round its own axis, such motion being produced by the filling the chambers alternately with gas and with water. The idea of measuring gas by causing the wheel to revolve is entirely

Mr. Clegg's own ; that is stated in the patent. The contrivance may assume various shapes, and the patent, in fact, is for the discovery of the application of this method to practice, by whatever mode the result is produced. The evidence has shown that the gas must be made from the coal, purified, measured and regulated in its supply to the burners. The apparatus is correctly called a gas apparatus, since it attains the four preceding objects, and was a complete apparatus at the time. The lime-water, under the old system, was extremely offensive, and difficult to be got rid of. The improvement in respect of that consists in using the lime in a more concentrated state, with less water, and therefore it occasions less smell. The retort and purifier have been superseded by other improvements, but they were useful at the time. The specification describes two kinds of gas-meters, either of which may be used. The principle of the machine is the alternate filling of the chamber with gas and water, causing the machine to revolve ; the passage which admits the gas being closed, while the passage which lets out the gas is open. One chamber is filling while the other is emptying, otherwise the wheel would not go round. That is the principle of the machine, without reference to the mechanical means of attaining the result,—that each chamber shall be perfectly filled, and that no gas shall pass without causing the wheel to revolve. The specification shows a meter with two or three chambers ; according to Mr. Clegg's subsequent improvements there are four chambers. The water is raised above the axis, and thus answers the purpose of cutting off the communication to the chambers below. The valve may be dispensed with, the water acting to prevent the passage of the gas from one chamber to another. In the improved machine, the rotary motion is produced by disturbing the equilibrium, and filling the chambers with gas and water successively, as in the old mode. The infringement complained of is a close imitation of this improved machine. The principle of Mr. Clegg's invention is the expansion of gas into chambers in which water is contained, so as to disturb the equilibrium, and thereby force the machine to re-

volve. That is to be effected, as described in the specification, by sealing the exit while the entrance is open for the gas, and by sealing the entrance while the exit is open ; and that the disturbance of the equilibrium may be perpetual, the introduction of the gas into one chamber should commence before its escape from another. These principles are applied in the improved machine and in that made by the defendant.

The philosophical fact that other substances than coal would yield inflammable gas was known before the date of the patent, but it was a general opinion that nothing but coal would be cheap enough ; to use any other substance than coal was never proposed, as of general application. The retort could not be used advantageously, if at all, for the making of gas from oil.

Lord TENTERDEN, C. J. I think it quite clear, in this specification, when he speaks of coal and other matters, he means matters *ejusdem generis*. The patentee must be understood to mean things that were in use, and not things which would produce gas, as everything inflammable would, but, from being so expensive, was never expected to be in use. He must be understood to refer to those things which practical men of the time would employ. There may be a patent in existence with respect to oil, but it is quite clear that was not thought of at the time these drawings were made by this patentee. Going on contemporaneously, somebody might be doing it, and he might be evolving it in a manner perfectly distinct from the use of coal. It is a hard case to set aside the whole patent because there is some little matter in it which is not quite right. It is a hard case, and therefore one ought to see that the objection is applicable.

Brougham, for the defendant (*Rotch* and *Patteson* with him). The law of patents, as it stands, is very hard against patentees, and inventors have great difficulty in securing their reward, for skill, industry and good fortune must concur ; but the law must be administered as it is. The specification must set forth the invention in all its particularity, in such a way that, without any further assistance

or explanation, without any experiments to be tried, a party reading the specification, and bringing to that perusal competent skill and an attention and deliberation proportioned to the complication of the subject-matter, may be able distinctly to understand it, and, if a workman, to carry it himself into execution. Such a party must not either be at a loss for want of further explanation or puzzled or perplexed by the obscurity of the specification, and so reduced to inaction, nor must he be at fault for want of new experiments ; the whole of the experiments ought to be performed by the inventor himself, and all the circumstances ought to have been so described that, without any more being written, a person of competent skill may be able to make the machine. The evidence for the plaintiff on this point, of such witnesses as Mr. Farey and Mr. Faraday, is not sufficient ; the question is whether an ordinary person, without their powers, could make the machine.

Further, it is essential, not only that the invention should be intelligibly described, but the process in all its parts must be successful ; the patentee undertakes to guarantee to the community the use of all that he claims as his invention. If he sets forth five different things, and four of them be such as merit the highest panegyric and are of the greatest benefit to society, and if the fifth be ever so trifling a part of the invention, but fail in either of the following ways, though the invention be truly described as to the other four, the patent is void as to these four, just as much as it is to the fifth.

Now, an invention may fail in two ways. A man may describe a machine, and say it does so much, the machine produces such a movement, and, however probable it may be on paper, whatever probability it has of succeeding in practice, nay, however it may do upon a working model before the specification is drawn, still, if when it comes into actual practice it is found not to produce that effect, there is an end of the patent. It may fail in another way : it may produce a movement, but a movement, like gold, may be bought too dear. It may be no advantage whatever when it comes to be used ; a part of it may be found to be

such that, though possibly the effect may be produced which the inventor pretends to produce by it, yet it may be produced at such a cost, with such loss of time and interruption of business and other inconveniences, not taken into account when he originally stated this to be a new and valuable invention, that these are not sufficiently counterbalanced by the actual good which is obtained from it; and if upon the trial it is found the old way is better with all its disadvantages, then he fails, because it is not useful as regards that portion of the invention.

Now, if any integral or material part of Mr. Clegg's invention be in either of these predicaments, either of not doing at all in the way described, or of doing inconveniently and disadvantageously upon the whole, and in such a way as no person in his senses, or with ordinary regard to his interest, would think of using it in, or still more if it should appear to be in both predicaments, there is an end of the patent.

I now purposely abstain from alluding to one part to which reference was made in my cross-examination, namely, with respect to the oil. His lordship has expressed a strong opinion that the specification must be taken *secundum objectam materiam*, and that it must be taken *ejusdem generis*, and that the use of the word "tar" does not control the subsequent particulars under the head of the retort, and therefore my showing that it was incapable of being applied to oil would not avail.

The want of a condenser is a material flaw in the specification. It is quite well known that the ammoniacal liquid which is distilled off from the coal or other materials from which gas is produced in the course of the distillation, that is, when it gets to the cooler part of the pipe, naturally condenses and impedes the operation for a certain time; and in order that the operation should go on at all with ordinary convenience, a vessel must be provided to contain the tar which is thrown off, and which, if not condensed, tends still more to choke the pipe. This can be condensed in a separate vessel by means of the pipes, or by means of a tar-cistern, or by means which have been more generally and

more correctly called the condenser, as applied to the ammoniacal liquor, as well as the tar, otherwise in the course of a very short time the tubes will be choked up, and the operation cannot be continued at all.

The principal objection is the mechanism of the retort itself. There can be no doubt that this would succeed in a model, but when it came to be attempted on the larger scale in practice, defects which were not anticipated showed themselves, and these retorts were abandoned after great expense had been incurred. These were disused, not in consequence of improvements subsequent to their invention, but from their own demerits.

The gas-meter, as described in the specification, did not come into general use, but was so cumbersome and inconvenient that it was not profitably employed until the subsequent improvements by Mr. Clegg, and one of which is admitted to have been suggested to him by another person. Now, though it was made by the patentee for his own use, yet if it was made at so great an expense and of so complicated a nature that it was found not to be worth the trouble and cost attending it, until altered by these subsequent improvements, the plaintiff's patent cannot be sustained in respect of this part of the invention.

Scarlett, in reply. The defendant has failed entirely to show that the specification is not sufficiently plain for a workman to make a machine; all the witnesses state or admit its sufficiency.

With respect to the objection to the retort, no evidence is given to show how often the old retorts burnt out, or to contradict the evidence that they frequently burnt out in a fortnight, and on an average did not last six months; that one of Mr. Clegg's lasted thirty-six months without being renewed, and it is admitted that the retort on a small scale is of great utility. The subsequent improvement of Mr. Clegg is only another mode of applying the same principle; had this not been described it would have been a fraud on the public, since the patentee is bound to communicate the best and simplest mode of practising the invention. It is no objection that the gas-meter was not brought immedi-

ately into general use ; it was many years before the public could be prevailed upon to adopt gas, and the meter was invented two or three years after gas works were set up.

Now it is admitted to be an invention of great genius, skill and knowledge, and that the defendant has imitated it. No objection is made to the governor or to the purifier ; the only question is as to the retort, and the defendant must prove this to be of no utility to entitle him to the verdict.

The jury, with the concurrence of the learned judge, without hearing the summing up, found for the plaintiff.¹

¹ WANT OF CONDENSER IS A MATERIAL FLAW IN THE SPECIFICATION.—The evidence as to this point given on the trial was substantially that “the gas apparatus described in the specification is not a complete apparatus, for want of a vessel to receive the tar and ammoniacal liquor which rise up to the mouth of the retort and must be condensed and conveyed away. The usual apparatus for this purpose can be applied without modification to Clegg’s patent.” [Lord TENTERDEN, C. J. The patentee does not claim to leave that out.] He claims the process from the putting in of the coal. [Lord TENTERDEN. I do not know that he does ; there is a certain mode pointed out, but he does not say that you are to dispense with the use of that which was previously known, the tar cistern, to condense the tar and ammoniacal liquor ; he does not say you are to dispense with that.]

A witness for the plaintiff stated that the apparatus described was a complete and perfect gas apparatus at the time ; that condensers have since been applied between the retort and the purifier, but they were not then known. The principle laid down by the learned judge is not affected by this fact. The thing might have been so well known to all persons of practical experience in making gas that it need not be mentioned. This point was not adverted to in the subsequent motion for the nonsuit.

TRIFLING ERROR SHOULD NOT SET ASIDE PATENT.—Webster, commenting on the ruling of the Chief Justice in the foregoing case—“it is a hard case to set aside the whole patent because there is some little matter in it which is not quite right”—says that it must be considered as having established a principle of great importance, since it not unfrequently happens that the terms of a prior patent may be sufficiently comprehensive to include matters to which it was never intended to apply. 1 Web. P. C. 108, z.

ABSOLUTE PERFECTION OF PROCESS OR INVENTION.—The hardship of the law in this respect is in a great measure obviated by the statute 5 and 6 Will. IV., c. 83, providing for disclaiming or amending parts of title and specification under certain circumstances. A rigid construction of the law must be limited to those cases in which the failure or defect is such as leads to a false suggestion ; for it has been held in several subsequent cases that a partial failure under certain circumstances will not vitiate. 1 Web. P. C. 109, i.

PROPER SUBJECT-MATTER OF LETTERS PATENT.—If a patent be vitiated by reason of its not applying to matters of subsequent discovery, it would appear to follow that a patent may include matters of subsequent discovery if its terms be sufficiently general and comprehensive. It would appear to follow also that the omitting or changing a particular process or operation as effecting by two processes that which had been previously done by three, or the obtaining an improved result by one particular order or sequence of processes instead of another, would not be the subject-matter of letters patent, all these having in fact been done before.

FELTON *v.* GREAVES.

King's Bench, June 6, 1829.

Infringement. Nonsuit. Insufficiency of Specification.

A patent was granted for a machine to sharpen knives and scissors. In the specification this was directed to be done by passing their edges backward and forward in an angle formed by the intersection of two circular files; and the specification also stated that other materials might be used according to the delicacy of the edge. There was proof that for scissors there ought to be one circular file and a smooth surface, but that two turkey-stones might also succeed. *Held*, that the specification was bad, as it neither directed the machines for scissors to be made with turkey-stones nor to be made with one circular file and a smooth surface.

Trial of an action for infringement.

The patent in question was granted to John Felton, the plaintiff, dated June 28, 1827, for “a machine for an expeditious and correct mode of giving a fine edge to knives, razors, scissors and other cutting instruments of various kinds.

The plea was the general issue. Upon the trial, the specification was put in evidence and one of the machines was produced; it contained two steel rollers about four inches long, formed with bosses and recesses, the bosses or elevated parts of one roller passing into the recesses of the other, and by those means forming an acute angle between them. The bosses of both rollers were files, and the recesses smooth. This machine was proved to be useful in the sharpening of knives, but it appeared that if both rollers

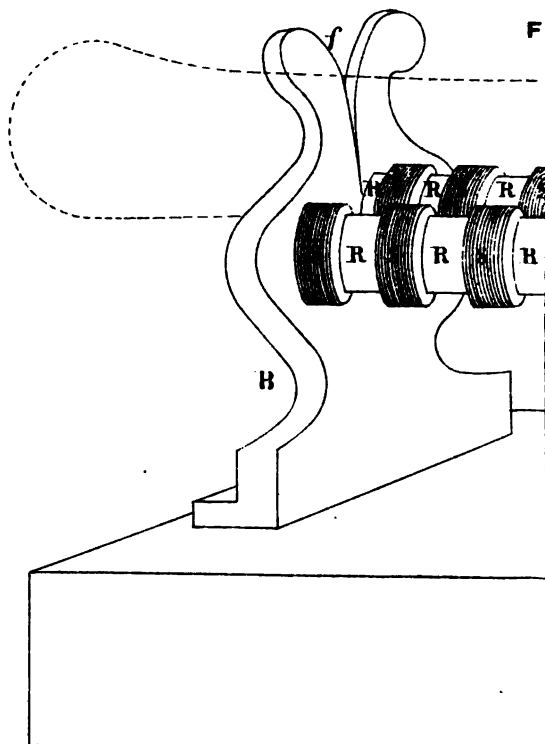
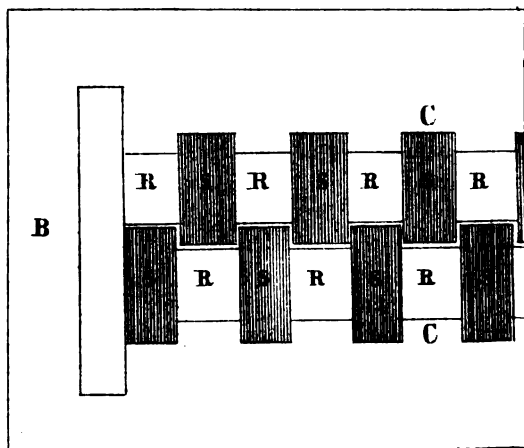


FIG. 2.



The enrolled drawing is partly colored.

Felton's Machine for Sharpening Knives, &c.

NOW KNOW YE, that in compliance with the said proviso, I, the said John Felton, do hereby declare the nature of my said Invention to consist in a machine for sharpening various cutting instruments, and particularly knives, by passing their edges backwards and forwards in an angle formed by the intersection of two or more circular files or other suitable surface, in manner herein-after explained; and in further compliance with the said proviso, I, the said John Felton, do hereby describe the manner in which my said Invention is to be performed, by the following description thereof, reference being had to the Drawing annexed, and to the figures and letters marked thereon, that is to say:—

DESCRIPTION OF THE DRAWING.

Figure 1 represents one of my said machines adapted for the sharpening of table knives. A is the pedestal; B, B, two upright; C, C, two steel cylinders or rollers turned down or reduced at the parts marked r, and revolving easily on axes at their ends, bearing in the uprights B, B. The larger parts of the cylinders or rollers, and which are marked S, are grooved or grained in a circular direction by means of an ordinary engraver's shaver, and thus have a surface given to them something like the sort of file which is generally called a float. The dotted lines represent the position in which the knife or other cutting instruments to be placed for the purpose of being sharpened, and it only requires to be passed a few times to and fro in the position here shewn to effect this purpose. Figure 2 is a plan of the said machine, shewing the relative situation of the cylinders C, C, and the manner in which the larger circles or circular voses marked S intersect each other. Figure 3 is a transverse section of the said machine.

Now whereas the cylinders may be made of steel or any other suitable metal or hard material, and the surfaces of the circular voses may be engraved or otherwise brought to a fine or rough state according to the delicacy of the edge required, and the slit marked f in the Drawing may be varied in shape, the better to hold whatever form of instrument it may be required to sharpen. But I claim as my Invention the machine herein-before described for the purposes aforesaid; and such machine being, to the best of my knowledge and belief, entirely new, and never before used within that part of His said Majesty's United Kingdom of Great Britain and Ireland called England, his said Dominion of Wales, or Town of Berwick-upon-Tweed, nor in any of His said Majesty's Colonies or Plantations abroad. I do hereby declare this to be my Specification of the same, and that I do verily believe this my said Specification doth comply, in all respects, fully and without reserve or disguise, with the proviso in the said herein-before in part recited Letters Patent contained; wherefore I do hereby claim to maintain exclusive right and privilege to my said Invention.

were files, it would not do for scissors, and that for scissors, one of the rollers should be quite smooth ; however, the witnesses stated that if turkey-stones were used for both the rollers, instead of steel, scissors could be sharpened with a machine so constructed.

Williams, for the defendant. According to this specification, both rollers should be of equal roughness , but as it appears that one class of cutting instruments, viz., scissors, require that the two rollers should be different, which is a thing not stated in the specification, I have to submit that the specification is not good.

Lord TENTERDEN, C. J. I am of opinion that this objection must prevail. The specification describes both the rollers as files, and on reading it with attention, I cannot find that the scissor-sharpener is described as having the two rollers different. It appears to me, therefore, that the specification is insufficient, as it nowhere states that the rollers for scissors must be one rough and the other not. With respect to constructing the rollers with turkey-stone, I cannot find that it is anywhere stated in the specification that turkey-stones used on both sides will do for scissors. The plaintiff must be nonsuited.

LEWIS v. MARLING

King's Bench, N. P., Nov. 3, 1829.

Extent of Claim. Publication. Prior User.

A patent is not avoided by the specification claiming as part, but not as an essential part, of the invention something which proved useless.

The patentee must show that the invention is new, but it is not necessary that he should have invented it himself. It is sufficient that it should be new as to use within the kingdom.

In describing a patented machine for shearing cloth, the specification directed plush to be used as a brush in effecting the purpose, but nowhere stated that this was an essential part of the machine. Some kind of a brush had previously been used in shearing cloth, but it was subsequently discovered that no brush was necessary with the machine in question. *Held*, that the direction did not invalidate the patent.

A model of a similar machine had previously been made, unknown to the patentee, but no similar machine had ever been used in the kingdom before the patent. *Held*, that this was not sufficient to defeat the patent.

Trial of an action for infringement.

The patent is described in *Lewis v. Davis* (*ante*, p. 407).

In the specification the plaintiffs claimed as their invention "a proper substance to brush the cloth," described as "a narrow strip of plush fixed on the surface of a cylinder parallel with a wire, to answer the purpose of a brush for raising up the wool, which is to be shorn off the cloth; or, instead of the plush, bristles may be inserted on the cylinder."

Evidence was given of the novelty of the invention and of the defendant's infringement.

A witness testified that previous to the invention of the plaintiffs' machine, some substance had always been used to raise up the wool to be shorn, but it was found that in the machine in question it was unnecessary, if more than one cutter at a time was used on the cylinder; and that, in point of fact, this plush never was used. He also stated that the plaintiffs had only made one machine which had it; and that out of one thousand and more of their machines that they had sold, none of them had any plush, or any other substance, to raise the wool.

Pollock, for the defendant. I submit that the plaintiffs must be nonsuited. The plaintiffs claim this plush as a part of their invention, and its application is minutely described in the specification. Now, the witness says that the plaintiffs never even sold a single machine that had this plush applied to it; and I apprehend that where a patent is taken out for a machine consisting of several parts, and one of them is wholly useless, the patent is void. It may be said that it is a hardship that the party should be obliged to make a specification before he has completed his invention; but to do that, time is always given. I admit that if a machine is described in general, it would be no objection that some particular part might be made better; but here this plush is claimed as a specific invention.

Scarlett, for the plaintiffs. The argument on the other

side is that if a man makes an improved machine, combining with it something that was always thought necessary, and it be afterward found that his improvement is so good that it dispenses with this thing that was always thought necessary, he is to lose his patent. The public is not deceived, and the only objection now is that it was found, a year after the taking out of the patent, that if more than one cutter were applied, the plush was unnecessary.

Brougham, on the same side. We say that one of our novelties is the using of a brush of plush upon the cylinder, and that is an improvement upon the older modes of brushing ; in the same way we say that our rotary cutters are an improvement on shears used by hand.

Pollock, in reply. If the thing was beneficial at the time of the invention, I admit that it will not vitiate the patent that it becomes of no use by means of something invented afterward ; but here the patentee claims as an invention a thing that with his machine is useless.

LORD TENTERDEN, C. J. This is a patent for an improved machine for shearing woollen cloths, which is to be effected by means of rotary cutters going from list to list. In his specification the plaintiff claims several things as of his invention, one of them being the application of a proper substance to brush the cloth. It appears that before this patent the universal practice was to raise the wool by means of some kind of brush : here the patentee claims the exclusive use of this plush for that purpose, but not as an essential part of his machine. He claims it as his invention, and states it to be a novel mode of doing that which was always done before either by a brush or by some other means. There was a case of a chemical compound, where the party mentioned in his specification some ingredient that he did not use, and the patent was held to be void (probably *Turner v. Winter*, *ante*, p. 43) ; but there the party deceived the Crown, and I think that that case is quite distinguishable from the present. Here the party says, this is a part of my machine, but he nowhere says that it is essential. I think, therefore, that there is no weight in the objection.

The defence was that the mode of shearing from list to

list by means of rotary cutters was not new at the time of the plaintiffs' patent; and it was proved that in the year 1811 a specification was enrolled in America for a machine to shear cloth from list to list by means of rotary cutters, and that in that year a model of an exactly similar machine was brought to England, and exhibited to three or four persons. It was also proved that in the year 1811 Mr. Thompson, a manufacturer in Yorkshire, employed workmen to make a machine from the American specification, and that they had set about it, but that, in consequence of the Luddite riots, Mr. Thompson was afraid to have it completed. However, in answer to this it was shown that after the riots had ceased the machine was left unfinished, and Mr. Thompson bought the plaintiffs' machine.

LORD TENTERDEN, C. J. The object of the plaintiffs' patent is a method of shearing from list to list by means of rotary cutters, and if the case rested on the evidence on the part of the plaintiffs, there is no doubt that the plaintiffs' was the first machine of this kind used in this country; but on the part of the defendant it is contended that there is such a want of originality and novelty in the plaintiffs' machine as will prevent their recovering in this action.

It is no doubt incumbent on the plaintiffs to show that their machine is new, but it is not necessary that they should have invented it from their own heads; it is sufficient that it should be new as to the general use and public exercise in this kingdom. If it were shown that the plaintiffs had borrowed from some one else, then, of course, their patent would fail. To show that the machine was not new, evidence is given that a model has been seen by three or four persons, and that the making of a similar machine was begun; but it appears to me that the defendant has failed to prove that such a machine was generally known or generally used in England, before the taking out of this patent by the plaintiffs.

Verdict for plaintiffs. Damages, £200.

It is stated in 4 Newton, Lon. J. 146, 2d Series, to have been given in evidence at the trial that a person named Jones, a cloth-dresser, employed for sev-

eral months several machines of this kind, having rotary cutters shearing from list to list, in his factory at Bermondsey, nearly twenty years before. Evidence of a similar kind is stated by Mr. Godson to have been given on the above trial. (Godson on Patents, 48, 2d ed.) This fact is not adverted to by the Lord Chief Justice or on the argument, and if the evidence were believed it shows an abandonment of the mode, and raises a strong presumption that, as compared with what the plaintiffs had done, this was only an experiment.

LEWIS v. MARLING.

King's Bench, Mich. T., 1829.

Extent of Claim. First Inventor. Prior Publication. Motion for New Trial.

The fact that a part of an invention described, but not claimed as essential, turns out to be not needed, does not vitiate the patent in the absence of fraud.

The prior exhibition of a model of a similar invention, unknown to the patentee, and not carried into use, *held* not to affect his patent.

New facts, which would be grounds for annulling a patent, will not be received on a motion for a new trial of an action for infringement.

Motion for a new trial.

The trial, which was for infringement, is reported as the last preceding case, where the facts embodying the patents, specifications, etc., appear.

The grounds on which a new trial was asked were, 1. The patent is void because the plaintiffs claimed as part of their invention the application of a brush for the purpose of raising the nap on the cloth. That proved to be entirely useless, if not prejudicial, and in fact they never sold any machines with the brush attached. The public therefore would be misled if, at the expiration of the time for which the patent was granted, they attempted to manufacture a machine on the patent principle. The answer given to this objection at the trial was that the specification did not describe the brush as an essential part of the machine. But that is no answer in law; the defendant has a right to consider the case as if the patent had been taken out for that only. In every patent all that is claimed must be new and

useful. (Turner *v.* Winter, *ante*, p. 43 ; Crompton *v.* Ibbotson, *ante*, p. 395.) [PARKE, J. The specification there stated that a certain article would produce the desired effect. The evidence was that nothing else would do it.]

2. Lord Tenterden did not leave the question of novelty to the jury in the manner warranted by former decisions. The substance of the invention was the application of a rotary cutter in shearing cloth from list to list. The evidence was that thirty years ago one Coxon made such a machine ; in 1811 a specification in which that principle was stated was brought over from America, and a machine commenced, but never finished. In 1816 a model of such a machine was brought over, and although no machine was made from it, the model was shown to various persons. The person who brought it over could not after that have maintained a patent for it ; and if he could not, it is difficult to understand why the plaintiffs should be in a better situation. [PARKE, J. It might be new in use, although the principle was known before.] Affidavits were then produced as to the knowledge of that whereof the plaintiffs claimed to be inventors before the patent was granted.

Lord TENTERDEN, C. J. I am of opinion that we ought not to grant a rule to disturb the verdict in this case. It is contrary to the usual practice to grant a rule in such a case on affidavits. If the facts disclosed in them are sufficient to vitiate the patent, it may be repealed by *scire facias*. As to the objection on the ground that the application of a brush was claimed as a part of the invention, adverting to the specification, it does not appear that the patentee says the brush is an essential part of the machine, although he claims it as an invention. When the plaintiffs applied for the patent they had made a machine to which the brush was affixed, but before any machine was made for sale they discovered it to be unnecessary. I agree that if the patentee mentions that as an essential ingredient in the patent article which is not so, nor even useful, and whereby he misleads the public, his patent may be void ; but it would be very hard to say that this patent should be void because the

plaintiffs claim to be the invento machine not described as essential to be useful. Several of the carbons borne hardly on the patentees, gone the length of deciding the patent void, nor am I disposed to

The next point was an alleged error of the jury. To impugn the novelty was given that one Coxon had purchased for shearing from list to list; but he never came into use. Another point was that a model had been sent over from the plaintiffs to a few persons, but no machine was made by any of the very persons who had the model. The specification had been brought over by persons employed to make a machine, but was never completed, so that nothing came out, no machine was put in public use, shearing from list to list. I told the jury to be shown that the plaintiffs had made a machine, that might answer the claim, but there was no evidence of that kind, and I refused to grant whether it had been in public use. I refused the granting of the patent. They found for the plaintiffs. I think there is no reason to find for the plaintiffs.

BAYLEY, J. I think there should be no objection to our refusing a rule will not hinder the plaintiffs from applying for a repeal of the patent. To support a patent it is necessary that the patentee should make a full disclosure to the public. If the patentee suppresses anything, or if he does not communicate all he knows, his patent is void. If he says that there are many persons who will do, when in fact one only will do, then his patent is void; but if he makes a full and fair disclosure of his knowledge at the time the patent is granted, it is required. Mr. Pollock objects to the plaintiffs' specification which respects the use of

period when this specification was made, the plush was in use, and there is no reason to believe that this patentee did not think it was a useful part of the machine. His patent is for an instrument where something of that kind was always thought material, and I am of opinion that the subsequent discovery that the plush was unnecessary is no objection to the validity of the patent. If the party knew that it was unnecessary the patent would be bad, on the ground that this was a deception ; but if he thought it was proper, and only by a subsequent discovery finds out that it is not necessary, I think that it forms no ground of objection.

Another ground of objection is this : it is said that communications were made from America. If it had been shown that the plaintiff had seen the model, and had borrowed from it, he would not have been the true inventor, and would therefore have misled the Crown : but if I make a discovery, and am enabled to produce an effect from my own experiments, judgment and skill, it is no objection that some one else has made a similar discovery by his mind, unless it has become public. So if I introduce a discovery, *bona fide* made, I may have a patent for it, though a person might have received privately a communication from abroad which would have enabled him to have made the machine. As to the affidavits, I do not think them sufficient to justify the court in granting a rule.

PARKE, J. The objection to the patent, as explained by the specification, may be thus stated. The patent is for several things, one of which, then supposed to be useful, is now found not to be so ; but there is no case deciding that a patent is on that ground void, although cases have gone the length of deciding that if a patent be granted for three things, and one of them is not new, it fails *in toto*. The prerogative as to granting patents was restrained by the statute 21 Jac. I., c. 3, s. 6, to cases or grants " to the true and first inventors of manufactures which others at the time of granting the patent shall not use." The condition therefore is that the thing shall be new, not that it shall be useful ; and although the question of its utility has sometimes

been left to a jury, I think the statute has been complied with and will be new. There was no evidence that the plaintiffs were not the inventors of the country at least. But the statute shall not have been used by other parties. The latter part of the condition has been complied with, and there was no evidence of the use of the invention after the grant of the patent, and the patentee has been deprived of the benefit of the invention because another also had invented and brought it into use. Upon these facts, neither of the objections taken on behalf of the plaintiffs are entitled to retain the case in their favor.

Motion denied.

CROSSLEY v. BE

Chancery, Dec.

Injunction. Patent ab

An injunction may be granted to restrain a patent from expiring, by sale of articles manufactured in violation of the patent in life.

Application for an injunction.

The patent in question is the same as in the two preceding cases. The bill was filed for title and the result of the proceedings was a decree at law, and alleged that communication had been made between the parties respecting copies of the gas-meters made and sold, and that the defendant was in a finished or unfinished state, but that the defendant had been received, and that defendant was in possession or power a large quantity of gas-meters unfinished, and which he intended to use, and prayed an injunction.

Counsel for complainant suggested that the defendant had a large stock of gas-meters, which, on the expiration of the patent in a few days, would be thrown on the market.

Lord Chancellor LYNDHURST granted the injunction.

BEESTON *v.* FORD.

Chancery, Dec. 22, 1829.

Injunction. Proof of Undisputed Possession.

Possession of an invention by a patentee, under a patent, is counted in favor of an assignee in determining whether the latter has had exclusive, undisturbed possession long enough to be allowed an injunction without an adjudication of a legal title.

Where a patentee has for a number of years enjoyed exclusive possession under a patent, equity will not allow that possession to be disturbed, but will grant an injunction until a trial at law, whatever doubt there may be as to the validity of the patent.

Upon the other hand, if such possession cannot be proved the court will not grant such protection, but will send the parties to a court of law to decide the question of validity.

Motion to revive an injunction.

The plaintiff held, by assignment from the patentee, a patent for an improvement in ships' cabooses. The defendant was making and selling a similar device; it involved an alteration by which, instead of the fireplace standing open and capable of being closed by an iron plate with hinges, a fixed iron plate was substituted and the fireplace was fed by means of a funnel; but in other respects the cabooses corresponded. On the general facts the plaintiff obtained an injunction which the Vice-Chancellor dissolved on cause shown against it by defendant. The plaintiff now moved to revive it upon proof that he and the patentee before him had enjoyed exclusive possession under the patent for about seven years. Some evidence was given on behalf of defendant adverse to the novelty of the invention.

Lord Chancellor LYNDHURST. considered as having enjoyed the time. The rule of law in these by Lord Eldon to be that where a of years enjoyed the exclusive court will not allow that possession will grant an injunction until I doubt there may be as to the value the other hand, if such possession court will not grant its protection to a court of law to decide the question (*ante*, p. 285), and in other cases at the bar, Lord Eldon had repeated upon it. The question, Lord Eldon these cases, was not merely before record ; for unless the injunction might violate the patent ; and that that the patentee must be ruined reason, although there was great Boulton v. Bull (*ante*, p. 99), that until the right of possession could were given to have the question. In the present case, therefore, relating to an actually been enjoyed seven years, it is authorities referred to that the possession is not disturbed. I cannot but entertain that the specification will be supported. The old machine, and the improvement much more minutely and accurately too, whether that part of the invention is a novelty, as to constructing the new invention. Its application however, be novel. The infringement supposing the patent can be supported appears to be accurately enough described, ever, my province to decide the question on the ground I have alluded to ; I grant the injunction to be revived. Some order made for the speedy trial at law

therefore order the declaration to be delivered before the essoign-day of the next term, and that the trial shall be in the Court of Common Pleas.

Injunction revived accordingly.

Re WHITEHOUSE'S PATENT.

Master of the Rolls, Jan. 13, 1830.

Engrossment of Patent. Amendment of Clerical Error.

Amendment of a clerical error committed in enrolling a specification may be ordered by the Master of the Rolls; as, in this case, by directing the word "wire," as written, to be altered to "fire," the word in the original draft.

Petition for amendment of the roll.

The patent in question was granted to Cornelius Whitehouse, dated February 26, 1825, for improvements in manufacturing tubes for gas.

On the petition of James Russell, stating the error to be a clerical one, and to have arisen in the engrossment of the specification, as appeared by the original draft from which the engrossment was made, and on the affidavit of the agent, it was ordered "that the proper officer do amend the original roll or entry of the said specification remaining of record in the Enrolment Office of this court, by altering the letter 'w' in the said word 'wire' to the letter 'f,' so that the same may read 'fire.'"

SHERIFF *v.* COATES.

Chancery, Jan. 22, 1830.

Jurisdiction to enjoin. Ascertaining Piracy by Inspection.

Equitable jurisdiction under statute 34 Geo. III., c. 23—allowing design patents—is not excluded by the special remedy thereby provided. Independent of that remedy, the statute vests in the inventor a right of property which,

In this case the evidence as to title dissolved, and an issue directed, the account.

Motion to dissolve an injunction

[illegible]

writing, signed by him or them respectively, in the presence of two or more credible witnesses, knowing the same to be so printed or reprinted without the consent of the proprietor or proprietors of such pattern, then every such proprietor or proprietors shall and may, if the offence be committed in England, by and in a special action upon the case, to be brought against the person or persons so offending, recover such damages as a jury on the trial of such action, or on the execution of a writ of inquiry thereon, shall give or assess, together with costs of suit," etc. This act was at first temporary, but it was renewed by the 29 Geo. III., c. 19, and finally declared perpetual by the 34 Geo. III., c. 23, which, reciting that the first act had by experience been found to be beneficial, re-enacts its provisions, and extends the term of the exclusive privilege from two to three months.

The bill stated that the plaintiffs were the original inventors and the owners of the patterns in question, and had fully complied with all the provisions required by the statute in order to invest them with the right of property. The defendants were Coates, a calico-printer of Manchester, who was charged with having copied and pirated the patterns shortly after their publication; Glover, who was Coates' agent and consignee in London, and who it was alleged had been concerned in the piracy, and had received and sold goods printed according to the pirated patterns; and Leaf, who had purchased from Glover, and was reselling large quantities of such goods, with a full knowledge, as it was charged, that they had been copied or pirated from the plaintiffs.

The motion which had been made without success before the Vice-Chancellor upon affidavits was now renewed before the Lord Chancellor on the coming in of the answers.

Wetherell, Knight and Parker, for the motion. A patent for so short a period as ninety days is a singular and most inconvenient subject for the cumbrous and dilatory machinery of Chancery to deal with. Long before the question of right, which depends on a number of other intricate questions of fact and law, could be discussed and deter-

mined, the exclusive privilege would have expired by lapse of time, and the court would be left to grapple with a shadow. The equitable interposition by injunction, which is always discretionary, would be peculiarly dangerous here, and might work grievous injustice ; for the malice of a rival manufacturer, by getting up a plausible *ex parte* case, might be able to crush the invention of an ingenious artist, and rob him of his just reward ; and before the truth could be discovered and the restriction withdrawn, the public taste might have taken a new direction, and compensation would then be impossible. This ephemeral species of monopoly is suited to the fluctuating nature of fashion, to which the prints owe their short-lived popularity and value ; and when the Legislature thought fit to encourage them by securing to the inventor an exclusive privilege, it also pointed out an appropriate and summary remedy against infringement. The remedy, by a special action on the case, was given because an injunction would have been absurd. Such an injunction, indeed, was never heard of. Although the statute has existed nearly half a century, this is the first time a court of equity has been summoned to assist in establishing a right under it, and even at law it has seldom or never been enforced,—a circumstance which of itself should be a reason for declining to interfere now.

Upon the sound construction of the Calico-Printers' Act, no right of property is vested in the inventor, and if so, there can be no jurisdiction. That act is framed very differently from the analogous statutes on which the copyright of authors and engravers is founded ; all of which, in distinct terms, confer or recognize the property independent of the penalties or forfeitures given to protect it. They first create the exclusive privilege ; then, in a separate section, they declare that the pirated books and engravings, as well as the plates, shall be liable to be seized and destroyed ; and finally they declare a general right of action or suit in the proprietor against the pirate. Here, however, there is nothing of the kind. As the privilege, whatever be its nature, has no existence at common law, any more than ordinary copyright, it must be strictly measured by the

words creating it, which form together one entire and connected clause, and bestow on the inventor one particular species of right and no other ; that, namely, of proceeding against parties infringing by a special action on the case. As to the defendant, Leaf, the statute clearly cannot apply ; for he is sought to be charged simply as a vendor of goods, knowing the patterns to be pirated ; which, supposing the fact of knowledge could ever be made out, would not be enough. It is not alleged that he was himself guilty of piracy by printing or reprinting those patterns, although, as the two members of the sentence are in the conjunctive, —“ if any person shall print or copy such original pattern, or shall print or reprint or cause to be reprinted, any such pattern, *and* shall publish, sell, etc., knowing the same to be printed, without the consent,” etc.,—the two circumstances of printing or reprinting from an original pattern and of publication with knowledge must concur, in order to bring him within the scope of the enactment. Against the other defendants the statute expressly prescribes a particular mode of obtaining relief, to which the plaintiffs ought to have resorted ; and that by implication excludes every other. (*Parry v. Owen*, 5 Atk. 470, and the dictum of Sir A. Hart in 1 Sim. 499.) [The Lord Chancellor said in his opinion the jurisdiction of equity was not excluded by the operation of this clause.] Upon the whole, the plaintiffs should be left to bring their action, and if they fail, as they must, against Leaf upon the statute, and against the others upon the evidence, their title to come here will be completely negatived. In the mean time the injunction should be dissolved ; for there can be no pretence of long enjoyment and possession by the plaintiffs ; and the evidence as to originality is conflicting. (*Hill v. Thompson*, *ante*, pp. 293–299.) A bare inspection will satisfy the court that great part, if not the whole, of the designs in these supposed original patterns is as old as the manufacture itself, and therefore incapable of appropriation. On that ground also the plaintiffs should be left to their legal remedy. (*Baily v. Taylor*, 1 Russ. & M. 73.)

It was then agreed that, as the right to several patterns

to relief against all the parties is founded upon two simple facts, the originality of our patterns and the imitation by the defendants,—facts which can only be properly tried by issues directed out of Chancery. For these reasons, we have rather chosen to pass by our common-law remedy and come at once here. If we have a property in the patterns, that course was unquestionably open to us. The additional redress by a special action on the case cannot, nor was it intended to, take away the remedy inherent in the right of property which we claim. We can be no worse off than if the statutory relief had not been granted. Equity frequently interferes, and that is its peculiar province, to recognize and protect a right for which no action is maintainable at all ; for example, in waste.

The only remaining question is as to the existence of a property in these designs. An attempt has been made to argue that the right of property and of action are in the statute so intimately blended as to be incapable of subsisting separately ; but that is a perversion of the act. To say nothing of the preamble, which is express, the words at the beginning of the enacting part are as strong as possible,—“that every person who shall invent patterns, etc., shall have the sole right of printing and reprinting the same,”—which is almost in terms the language used in the copyright and engravers’ acts ; and they have always been admitted to confer a property in the works, independent of the remedies given by the subsequent provisions. (Beckford v. Hood, 7 Durnf. & E., T. R., 620.) The remedies afforded by those acts by means of forfeitures and penalties can make no possible difference as to the right created by the previous section. Here the enactment is much shorter, being compressed into one section, but it consists of two distinct and easily separable clauses. Under the first, which confers the property, the inventors may come here to prevent the manufacture of any goods of pirated patterns, whether they are sold or not, within the statutable period ; whereas under the second there must be a publication and sale, as well as piracy, in order to found the right of action. And yet unless there is protection against both, the object of Parlia-

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medium of Glover ; and Coates, after he had seen this specimen, drew the pattern which is supposed to be the imitation. That pattern has been produced to the court, and on inspection and comparison of it with the other, I can perceive no difference, or a difference so slight as to be colorable only. As to the second, the originality, it is essentially necessary that the party applying for equitable interposition should establish the originality of the pattern in a court of law. Here it is at all events impossible to come to any satisfactory conclusion upon that subject, since, from the difficulty of sifting the evidence, and the want of a power to cross-examine the witnesses, I feel myself wholly incompetent to pronounce whether this is or is not an original pattern. The only remaining question is whether that point will be best determined by an action or an issue. My original impression was in favor of the former ; but in this case it becomes an important consideration that, from the language of the statute, the question cannot be properly tried in one action. An action cannot be maintained against Coates, Leaf and Glover. To try it properly there must have been at least two actions,—one against Coates the printer, and another against Leaf and Glover, the vendors with knowledge. But here the question of originality may be tried in the shape of an issue, giving the party also the opportunity, if he chooses and thinks it worth his while, of trying the question of piratical imitation in a second issue. In the mean time I shall direct the injunction to be dissolved, and the parties to keep an account of the profits of their sales. For it may turn out, on the investigation at law, that the pattern is not original ; and the property might be destroyed by continuing the injunction till the result of the trial. As to the other cases, I think I ought to dispose of them in the same way ; for though the evidence in one of them is certainly stronger against the claim of originality, yet as there was no opportunity to cross-examine the witnesses, I cannot satisfactorily decide, without sending the question to law.

CROSSLEY v. BEVERLEY.

King's Bench, Hil. T., 1830.*Construction of Letters Patent. Of Specification. Intermediate Improvements.*

The letters patent and specification are to be taken as one instrument.

The insertion of improvements devised in the interval between granting the letters and filing the specification is proper, and does not avoid the patent.

Motion for nonsuit.

In support of a rule to show cause why nonsuit should not be entered in this action, *Brougham* argued : The improved gas apparatus consists of four several parts,—a retort upon a new construction, a purifying apparatus, a gauge, or rotative gas-meter, and a self-acting governor.

The only question here concerns the gas-meter. It appeared that, the object being to measure successively the portions of gas which should be introduced into any burners or lamps from the reservoir where the gas was kept, or from the furnace where the gas was originally evolved, this purpose was accomplished in the following way : A drum, or hollow wheel, or hollow cylindrical vessel, was filled successively with gas, and by a contrivance the gas was let out in portions equal of course to the solid contents of that cylinder, and then by a clockwork movement of some sort, which is no part of the invention, the number of the revolutions of the cylinder was registered. It is so contrived that at each revolution it shall be completely emptied of gas. Everything therefore depended upon giving a rotary motion, upon its axis, to that cylinder, and expelling the gas completely at each revolution. The means to these ends are stated in the specification. At the proper periods of the revolution, the hollow arms conveying the gas are to be sealed, as it is called ; that is, filled by water carried in buckets, which at a particular period of the revolution become inverted, and pour the water into the hollow arms so as to seal them, and thus cut off the communication at the proper part of the revolution. There are also hoods to

cover the opening in the outer rim at proper places and proper times of the revolution, so that the effect is produced of completely expelling the gas, and always securing that at each revolution the gas which had been taken in to fill the partition should be expelled, and that the water should only come in at the proper time, and that the water should be expelled at the proper time.

The objection to be taken to the validity of this patent depends entirely upon this part of the invention. That which does not often occur in patent cases occurs on this occasion, and from its so seldom happening arises the fact, which is undeniable, that the objection now made has hardly ever been made before. As the action was brought, not by the patentee, but by the assignee of the patent, the patentee himself was examined. There was a difficulty as to a release under the assignment, but that was effected, and he became a competent witness. It appeared in his examination that, though he had in his mind the general idea of a rotary motion, of the measuring of gas by a drum or hollow cylinder, and of conveying a rotary motion to the hollow cylinder by introducing the gas inside, and disturbing the water in which the cylinder was placed so as to alter its centre of gravity, and occasion and give a beginning to the motion which was afterward kept up; that though he had that in his mind at the time when he applied for and obtained his patent, yet that between the date of his patent and the enrolling of the specification, he had made three material inventions, of all which, taken together, the gas apparatus consisted. He invented the buckets, and the sealing by means of those buckets; he also invented the hoods at the same time that he invented the buckets, and the sealing by means of the buckets; and though it did not appear so distinctly, it rather appeared, upon the whole of his examination taken together, that the hollow axle was invented nearly about the same time, and subsequent to the grant of the patent.

Great reliance in the whole cause was placed upon the hoods, and for this most obvious reason,—that it was therein the imitation had taken place.

Now though it is not necessary that he applies to the Crown for a patent in writing, or, according to the language contained in writing," the whole of the invention reduced it to writing, or put it into writing in his mind the idea of the whole of the machine—if it is a machine in the present case it clearly is—so that he has put his petition with truth and correct statement the patent is granted to him for that of which he claims the sole right at the time. It is needless to point out what would follow if a man were only to put an idea in his mind, and say he had formed it, it is very probable he might have obtained a patent. It is very probable the whole of the machine was in his mind and familiar to his thoughts, and he had the invention ; but he must have put it into writing which that purpose is executed ; and he has done so of the specification, "have invented a machine by which it was so arranged that each of the several tubes will be filled with gas from the tubes emptied of the same into the exit tube, and the piston makes a revolution." There are two figures, figure 10 was the one which alone has been usefully employed, the figure 11 is of great complexity. [Lord TENNENT said, "The same principle, but more complicated,"] In the examination, he had invented the machine before the patent, but the other machine was a great improvement upon the other (and, without the least doubt), which alone has been found being found useless from its complexity, an ingenious contrivance for accomplishing successively filling and emptying, by opening the tubes at the several points, that was figure 10, and it was quite new to him after the patent was obtained, and he obtained the enrolment. [BAYLEY, J. He

out the patent he had discovered a new method ; but between the time when the patent was taken out and the time he made out his specification, he discovered certain improvements.] "Certain improvements" which he added to it, and which he makes a part of the specification. If any thing is added to a specification which is at all different from, or an addition to, the patent, of course the specification is void as to that, and is void as to all ; but it is also perfectly clear, and it has been so held, that if, for anything in the specification the patent would be void, the patent would be void for the whole. (*Hill v. Thompson*, *ante*, p. 304 ; *The King v. Wheeler*, *ante*, p. 317 ; *Brunton v. Hawkes*, *ante*, p. 336.)

Now it signifies not whether anything is void in the specification, on account of its not being new, or on account of its not being useful, or on account of its not answering the description ; these are all grounds upon which its invalidity would be clear, but it signifies not whether those be the grounds of the invalidity of any part comprised in the specification, or whether it is void upon any other ground. Now I submit it would clearly be void equally if it is in the specification and had not been invented at the time the patent was granted, because the patent is only granted for that which is invented at the time the application is made. The inventor petitions the Crown in the words that are always used, and which are set forth in the declaration : "he represented that he had, after considerable application and expense, invented an improved gas apparatus, which invention he believed would be of general benefit ;" and upon that the Crown granted him the exclusive use of that invention for a certain time, but it was upon the condition that he should specify what it is he had invented. He can only specify that which he had invented, but he specifies beyond what he had invented—for instance, the buckets and the hoods. If he specifies the buckets and the hoods beyond what he has invented, *pro tanto* it is void. He has no machinery of the buckets or the hoods ; the specification therefore *quoad hoc* is void, and therefore, according to the principle in *Hill v. Thompson* (*ante*, p. 304), the whole is

consequently void. Indeed it would appear in this case that the whole consisted in the contrivances. The way in which the purpose was executed was here everything, for the whole is a gas apparatus, and, although one mode of accomplishing his purpose might have been known at the time he applied to the Crown, and therefore, with regard to that, he may be said not to have deceived the Crown in his statement, because he had invented that at the time ; but when he afterward adds another, as if it were part of his original invention, it is a deception which, if practised, it signifies not whether upon the public subsequently or upon the Crown in the application, is equally a deception, because the person is only to specify that which he had invented before. [BAYLEY, J. You say this,—that if a man improves upon the thing for which the patent is taken out between the period of time when the patent is granted and the specification, he must either take out a new patent, or he must keep to himself that improvement.] Certainly, because in fact the specification is the description ; that is, he describes and specifies the whole of the invention for which he obtained the patent. He might be called upon at the time for a specification, and may, in certain cases, in consequence of a caveat, be called upon to give every one figure of his patent. I am quite aware that is not what is constantly done ; on the contrary, I may say, the opposite practice is more frequent. [BAYLEY, J. Would it not be an objection to the patent that you, having taken out your patent for a new apparatus for making gas, had, before you came to your specification, discovered some important improvements in that apparatus ; would it not be bad if you did not specify those improvements in your apparatus, but were merely confining your specification to what was your knowledge at the period of time at which the patent was taken out ?] I do not see how that could be a fatal objection, and for this reason : I take it that, strictly speaking, the whole must be considered one exposition, and at the time the party applies to the Crown, he may be called upon to specify the whole ; for, suppose a caveat is entered, he would have to go before the Attorney-General, and the

Attorney-General may call upon him then and there to state every part of his invention, and to give very minute information of it. Time is given to him in order to prepare it by reducing it to writing. [LITTLEDALE, J. That general statement of his invention upon which he first applies to the Crown is equally applicable to the present specification, and to what the specification would have been if he had merely put down what was passing in his own mind at the time of the specification; the description of the patent is the same.] It is applicable to it as far as it goes. [LITTLEDALE, J. The description of the invention upon which he first applied would not have been varied.] No, because the description is so general; it is "a gas apparatus." [LITTLEDALE, J. And therefore it is something which is passing in his mind, and which he never discloses to any one until he exhibits a machine of the power of ten, and when he applied for a patent it had only a power of five.] He applies for a patent for one thing, and he specifies that and one or two other things, which other things I admit will come under the same general principle. [Lord TENTERDEN, C. J. And all founded upon the same principle.] Founded upon the same principle, but different contrivances for carrying the principle into execution. [Lord TENTERDEN, C. J. Different mechanical contrivances for carrying it into effect.] And some of those contrivances he had invented between the grant and the specification. They are new inventions, and they might have been the subject-matter of a new application for a new grant.

Lord TENTERDEN, C. J. That would have been less beneficial to the public, because it would have prolonged the time of the monopoly. The objection really would come to this. If at the time a person applies for the patent he has in his mind an invention capable of producing the effect which he represents it to be capable of producing, and has brought that invention to a great degree of perfection, and within the time allowed by the patent for exhibiting the specification, and before the arrival of that time, he perfects his invention, and renders it more complete by the intro-

duction of a different species of machinery, by the application of that to different mechanical parts of the machine, if so, whether that will make his patent void. No case has ever decided that, and I think it would be extremely dangerous to lay down any such doctrine. I do not see myself why time is allowed to prepare the specification, except upon the idea that the person, at the time he took out his patent, has not brought his machine, or whatever he has invented, to that degree of perfection which it may be supposed he is capable of bringing it to, and therefore he is allowed further time to do it. If in the interval another person should have hit upon that which he has hit upon, that patent will not be for what in the mean time has been discovered by another person. He runs all those hazards by the delay, but if during that delay the invention was perfected, and approaches to a perfect accomplishment of the object which he had originally in view, I own I do not see that can be any objection to the patent.

BAYLEY, J. I think the specification and the patent are to be taken as one muniment in enforcing this claim on the part of the patentee, and they only. The specification, with new improvements, would still be the thing for which the patent was obtained, and I think it is most beneficial to the public to say that it is the duty of the inventor, if between the period of taking out the patent and enrolling the specification he makes discoveries which will enable it better to effectuate the thing for which the patent was obtained, not only that he is at liberty to introduce them into his patent, but that it is his bounden duty so to do, and that it is not sufficient for him to communicate to the public the knowledge which he had at the time he obtained the patent, but he ought to communicate to the public the knowledge he has obtained before the specification; and therefore I am of opinion, in this case, the objection which has been taken to this patent is not to be supported.

LITLEDALE, J. I am also of the same opinion. This patent was taken out for an improved gas apparatus, and at that time the inventor has something in his mind which he considers will be a benefit to the public, and he applies

to the Crown upon that prospect which he has of doing something from which the public are to derive a benefit. He is allowed a certain time to make out his specification. He may be called upon by the Crown to do it immediately, but, however, time is given. In the mean time, something contributing very materially to the improvement of that comes into his mind, and before his specification is made out, he finds that will answer, and he introduces it into his specification. Now, it can only be upon a very strict technical rule that the addition in the specification to what was passing in his own mind when he applied for the patent would render that specification, and the patent which was obtained upon that, entirely void. It has been held that if a man applies for a patent for two things, and he is not the inventor of one, or there is some objection to one of them, the whole is void, because it is considered he is making an unfair representation to the Crown, and the Crown grants him that patent upon that representation ; that is unfair, and if any one part fails, the whole is to fail also. That, however, appears to me to be only a technical rule, which has been intended to prevent frauds in obtaining patents, or for some other reason ; but it is merely a technical rule, and there is no reason why it should be carried further than it has been. For the same reason, if he takes out a patent, it may be, if the specification is bad in part, that part of the specification which is bad for any reason may vitiate the whole, and render the whole void. But in this case there is no deception practised on the Crown, because he intended really and *bona fide* to give a gas apparatus. There is no deception practised upon the public, for the public, until the specification was enrolled, are unacquainted with the mode in which that is to be carried into effect. It is merely floating in his own mind ; his mind has got into an improving state, and his mind is able to give an improvement that I will call five, and from day to day, as he puts this machine up to see if it will answer and see that the specification is right, he finds from day to day that five will increase to seven, or eight, or ten. Surely it would be a hard thing upon him if, when he has made this improve-

ment of double value, or if having given a double mode to the public, that the whole should be rendered void and he should be deprived of the benefit because he had not communicated the whole of what was passing in his mind at the time the patent was taken out. I must own I think it would be an extremely unjust thing if it were so, and I know of no principle of law upon which it should be so decided.

PARKE, J. I was concerned in this cause when at the bar, and therefore I will give no opinion upon it.

Rule refused.

REQUISITE DIFFERENCE TO SUPPORT SEPARATE LETTERS PATENT.—The object of the law officers of the Crown, in ascertaining whether the inventions of two rival applicants are the same, or sufficiently distinct to support separate letters patent, would, it is conceived, rarely require the detailed account stated in the foregoing case. The first question would have been whether the invention of the opposing party possessed the peculiar feature of measuring the gas by the rotation of a vessel, and the alternate filling of its chambers with gas and water; such rotation being due to or produced by that alternate filling. The next question, supposing both parties to have hit upon this principle, would have been as to the particular modes, and then the particular question of the hoods might have arisen; for neither party could have had a patent under these last-mentioned circumstances, except for the particular mode of applying the principle. See Web. Law and Practice, Ind. tit. Opposition.

DUVERGIER v. FELLOWS.

King's Bench, May 14, 1830.

Bond for Price of Patent. Illegal Condition.

A bond was given for payment of £10,000, with a condition that the money should be paid on the obligee's procuring subscriptions for nine thousand shares in a company to be formed of many persons, for the purpose of becoming assignees of a patent, and carrying on the patent process. The patent contained a proviso that it should be void if assigned to more than five persons. *Held*, 1, that the obligee must be presumed to know of that proviso;

2. As the bond was subject to a condition for the performance of an illegal act, it was void.

Error to the Common Pleas to review a judgment for defendant on demurrer to pleas.

The action was debt on a bond for compensation for services in organizing a company to work a patent. The defendants cravedoyer of the bond and condition, which were for payment of £10,000 to the plaintiff in the event of his procuring subscribers for nine thousand shares in a company to be formed for becoming assignees of two patents in which the defendants were interested, and for carrying on the patent process; and then pleaded, among other things, that the patents contained a proviso that they should be void if they were assigned to or in trust for more than five persons. Demurrer and joinder. The Common Pleas gave judgment for the defendants. (See *ante*, p. 398.) A writ of error was brought, and now the case was argued by

Follett, for the plaintiff in error. There is nothing on the face of these pleas to render the bond void in reference to the proviso in the patents, nor is there anything to show that the intended company would be illegal, or at least that it was the intention of the parties to do such an illegal act as would render the bond void. The right of the plaintiff to sue is founded on the obligatory part of the bond. The condition is introduced for the benefit of the obligor, and there is a fallacy in supposing that the performance of that is a condition precedent to the right of the obligee to sue on the bond. The defendants, in order to get rid of the action, must show that the condition was illegal. Now the illegality relied on is that the thing agreed to be done was in contravention of a proviso in the patent. But to make the bond void, the thing to be done must be shown to be *malum prohibitum* or *malum in se*. It is not sufficient to avoid the bond that the condition is impossible or repugnant, or against some maxim of law. (Shep. Touch. 372.) [BAYLEY, J. Monopolies are against the law, and are declared so to be by 21 Jac. I., c. 3. Patent rights are an exception out of the statute, but unless you keep within the patent, you act illegally.] Upon this record there is nothing to show that the plaintiff was about to do any illegal act. If anything of the kind was to be done, the defendant was the guilty person. [Lord TENTERDEN, C. J. The recital is that the plaintiff consented and agreed to form the

company.] Unless it can be shown that he knew the act to be illegal, he cannot be affected by it. Nothing of that kind appears in the bond and condition, nor are there any averments to show that the plaintiff was to participate in any fraud in getting up a company to receive patents which could not lawfully be assigned to them. It should be averred that the plaintiff knew the contents of the patents, which does not appear, nor was it necessary for him to have that knowledge in order to do that which it was incumbent on him to do. Suppose the plaintiff had actually succeeded in forming a company, and that then, when they came to receive the patents, it had been discovered that these could not be assigned to a company consisting of so many persons. That would not have furnished any answer to this action. As the case now stands, there is nothing illegal in that which the plaintiff has done, nor is there any proof that the defendants intended to do anything illegal. The defendants might lawfully assign the patents to any number, and so preclude themselves from objecting to the use of the patent principle, although the assignees might not acquire an exclusive right to the use of it. [BAYLEY, J. The plea avers that the thing was to be done under pretence of carrying on the exclusive process.] That pretence was not illegal, and if the condition was impossible, that fact must have been known to the obligors, and cannot be set up by them as an answer to the action.

Lloyd, for the defendant in error, was stopped by the court.

LORD TENTERDEN, C. J. I am of opinion that the proviso in the patent has the effect of rendering the bond altogether void. The condition of the bond comes to this: Certain persons being possessed of two patents, and desirous of assigning them to a large number of persons, and it being supposed that the plaintiff was connected with persons able to form such a company, it was agreed that if he succeeded in procuring subscriptions for nine thousand shares, he should receive a certain sum of money. The plaintiff was to be active in promoting the scheme, and the persons who subscribed could not derive any benefit from it. Now it is said

that the plaintiff might be ignorant that such a consequence would follow ; but on this record, we cannot find grounds for supposing that he was ignorant. If he was not cognizant of the terms of these particular patents, he must be presumed to know the general law of the land. By that all monopolies are illegal, but there is an exception in favor of patent rights ; and if he knew that the monopoly proposed to be created could only be justified by the patents, he was bound to know their contents. We cannot presume that he was ignorant of that which it was his duty to know ; and presuming that he knew the terms of the patent, the bond is void, and the judgment of the court below must be affirmed.

BAYLEY, J. The plaintiff was to receive the instalments on certain payments to be made by the owners of nine thousand shares. He was bound to know that those persons were doing a legal act.

LITLEDALE, J. I am of the same opinion. All monopolies are illegal unless allowed by a patent, which cannot be assigned at all unless power to that effect is given by the Crown. The plaintiff, therefore, was bound to see and ascertain that these patents might be assigned in the manner proposed.

Parke, J., having been counsel in the cause, gave no opinion.

Judgment affirmed.

COCHRANE v. BRAITHWAITE.

Chancery, July 31, 1830.

*Injunction refused on Proof that Defendant had used the
Invention before Plaintiff.*

Application for an injunction.

The plaintiffs obtained an injunction to restrain the defendants from using and putting in practice an invention for which the plaintiffs had obtained a patent on May 4,

1818. The defendants had also for their invention, which was which the defendants said they do by the means set out in the contended that the plaintiffs' in the failure was evidenced by the the patent had been granted even had not brought it into public that the improvements introduced alone, had rendered steam-boilers since the successful working by within a few months of the present had the defendants in any way use, and then only an imperfect

The LORD CHANCELLOR, in have read the affidavits in this on the part of the plaintiffs in case from the court that it was desired done by the patentees in exercise to be infringed. These affidavits statement of counsel in argument patentee only applied the invention of steam-engine boilers about Mr. Braithwaite, the defendant, enjoyment of his patent, and had engines, upon the plan described period of more than eighteen months, I think it is not a case where the parties should be left to their therefore refuse this motion, and award of costs until the result of

Carpmael says (P. C. 493, note): " This case the Court of King's Bench before Lord Tenterden's lordship directed the jury that the use of the was essential, and as the defendants used no water the air and products from the fire, there was upon application a new trial was granted, the court did not so have directed the jury. There having been raised in the first trial, it is not thought desirable

COCHRANE *v.* BRAITHWAITE.**King's Bench, N. P., 1830.***Construction of a Specification. "Any Other Known Means."*

The phrase "or any other known means" in a claim construed, and held to include narrowing an outlet, contrived as a means by defendant of compression, equally with the patentee's device of weighted valve.

Trial of an action for infringement.

The action was one brought to try the validity of a patent granted to the plaintiffs, Sir Thomas Cochrane and Alexander Cochrane, dated 1818, No. 4253, for machines for removing the smoke or gas generated in stoves, furnaces, etc.

The plaintiffs contended that steam-engine boilers, which the defendants, John Braithwaite and John Ericsson, were making and selling were an infringement of the above-mentioned patent. The whole question turned on the proper construction to be put on that part of the plaintiffs' specification in which plaintiffs' invention was described to consist in so forming the furnace of a steam-engine boiler, that the whole should be closed, ash-pit and all, in such manner as to receive air under compression, the products of combustion getting away only by overcoming an impediment in the flue or chimney. The defendants' boilers were made with a closed fireplace and ash-pit into which air was blown as in the plaintiffs'; but, in place of using a valve at the end of the flue or chimney, the defendants diminished their flue in diameter so as to retard the passage of the air and hinder the products of combustion from passing so freely as they would if the flue continued of its full diameter all the way.

See the decision in Chancery reported as the preceding case.

Many witnesses were called on the part of the plaintiffs, who stated that the great end and object of the plaintiffs' invention was so to prevent the air and products of combus-

tion passing away from the fire freely, that air should be at all times in a state of compression in the ash-pit and fire-place, and that although the plaintiffs had shown and described a valve as the retarding means, the specification was not confined thereto ; but the specification claimed the retarding the escape of the products from the fire, so as to keep the air and products of combustion in a state of pressure greater than the external atmosphere, and whether it was done by a valve or by contracting the outlet, it was in no way material.

On the part of the defendants it was contended that the plaintiffs' invention was for the use of the valve ; and as no valve was used by the defendants, there could be no infringement. And several witnesses were called, who spoke to the difference of effect which resulted from the use of a valve and a contracted passage : the first would emit the products suddenly at intervals, while the contracted passage was uniform in the delivery of the products passing from the fire. But most of their witnesses agreed with plaintiffs' witnesses that the object of both plaintiffs' and defendants' inventions was to keep the air under compression in the ash-pit and furnace. It was proved that the defendants had taken out a patent on January 31, 1829, for making the passage contracted as a means of retarding the passage of air, etc., and that the defendants were working according to their patent.

In reply, the counsel for the plaintiffs contended that it was not material whether the defendants had or had not a patent ; they had no right to use the plaintiffs' invention without a license. It was possible that the defendants' means of accomplishing the result were better than the plaintiffs', as described in their specification. This might justify the second patent and support it, but then they should come to the plaintiffs for a license to use means of retarding the passage of the air from the fire ; that was the plaintiffs' patent. The specification pointed out one means which had been fully proved would answer in practice ; the defendants had only varied the means, but not the general proposition or principle of the patent.

Lord DENMAN, C. J., having read over the evidence to the jury. Lord Tenterden, in the former instance (see note at end of preceding case), nonsuited the plaintiffs from an idea at that time that the valve at the extremity of the flue was the essential feature of the plaintiff's invention, and that as the defendant did not use a valve it could not be said that the two machines were similar; but I do not consider such valve an indispensable condition of the plaintiff's invention, and such was the opinion of the court when a new trial was directed. The plaintiff in his specification says, "c is the plate or valve by which the smoke, gas and heated air are compressed, according to the pressure placed on such plate or valve, either by any weight or fluid, or by any other known means of producing any required resistance." All that seems indispensable is that the required resistance, the necessary degree of compression, should be produced; and if that could be obtained by narrowing the outlet as well as by a weighted valve, I think such a mode of effecting the object must be held as being covered by the words "any other known means of producing any required resistance." Several of the defendants' witnesses have given it as their opinion that an apparatus constructed in the manner set forth in the plaintiffs' specification would not work, but I do not think any mere opinion of this sort is to be put in competition with the positive testimony of such men as Brunel, Bramah, Birkbeck, Turrell and Parthington, all of whom swore that they had actually seen the plaintiffs' apparatus at work.

The jury found for the plaintiffs.

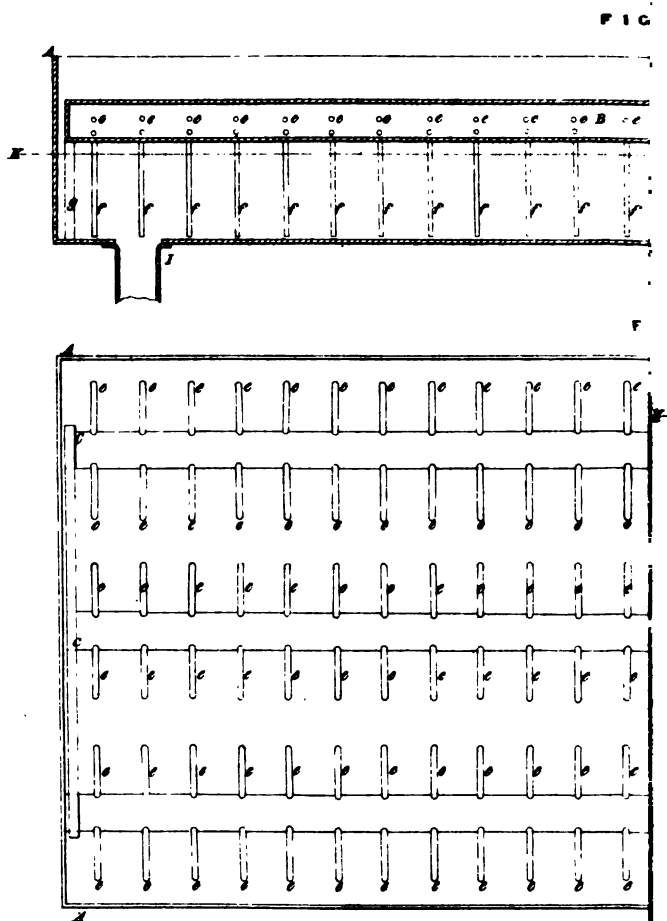
HULLETT v. HAGUE.

King's Bench, May 5, 1831.

Specification. Construction.

When the object of two patents is the same, but the mode of effecting that object, which is the thing claimed, is different, the prior patent does not affect the novelty of the subsequent one.

1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.



The unrolled drawing is colored.

Kneller's Improvements in Evaporating Sugar.

NOW KNOW YE, that in compliance with the said proviso, I, the said William Godfrey Kneller, do hereby declare that my said Invention consists in a method or process and certain apparatus as herein-after described, by which I am enabled to evaporate liquids and solutions at a low temperature, and thereby to avoid the injury to which certain substances, which require a nice and delicate application of heat, such as sugar, for instance, are liable to be by being exposed to too high a temperature.

And I do further declare, that my said Invention and improvements consist in forcing, by means of bellows or any other blowing apparatus, atmospheric or any other air in a hot or cold state through the liquid or solution subjected to evaporation, and this I do by means of pipes whose extremities reach nearly or within such distance as may be found most suitable, under peculiar circumstances, to the upper or interior area of the bottom of the pan or boiler containing such liquid or solution, the other extremities of such pipes being connected with larger pipes which communicate with the bellows or other blowing apparatus which forces the air into them. The pan or boiler may be of any shape or dimensions, but I prefer it with a flat level bottom; and I introduce the liquid or solution to the depth of from about 4 to six inches. The heat may be applied to the lower or exterior area of the bottom of such pan or boiler by naked fire, steam, or hot air, in the usual manner and by means well understood; the air then forced into the heated liquid or solution keeps it in a constant agitation, abstracts its heat and carries off the steam or vapor which is to be expelled. By raising the degree of heat under the pan or boiler and increasing the quantity and velocity of the air injected into the liquid or solution, or, on the contrary, by lowering the heat, and moderating the injection of air, the evaporation is accelerated or retarded at the pleasure of the operator, according to the nature of the substances or the effect desired.

And I do further declare, that in applying this my said Invention and improvements to the evaporation of cane juice or syrup for making refined sugar, I can bring it to the proof or crystallising points by keeping temperature of such syrup or cane juice between one hundred and forty and one hundred and seventy degrees of Fahrenheit's thermometer, although I prefer to keep it between one hundred and sixty and one hundred and eighty degrees. By this simple and cheap apparatus I obtain a great large and shining crystals, which hitherto were attainable only by methods, by exposing the sugar to a high temperature, impure, and brilliancy of the crystals, and form a great quantity of treacle.

And I further declare that this my Invention and improvements can be applied to the evaporation of other liquids and solution as well as syrups and cane juice or sugar, by varying the apparatus and the degree of temperature according to their nature and the will of the operator.

And I further declare that this my Invention and improvements can also be applied to distilling or rectifying spirits, provided that a vent be given to the air arising with the spirit after the latter shall be condensed.

And I further declare that in order more quickly to remove the steam or vapour from the surface of the liquid or solution, and thereby to favor the evaporation, sometimes, particularly when I use hot air for heating the pan or boiler, conduct the hot air, after it has given out part of the heat to the bottom of the boiler, to the surface of the liquor or solution; but I do not consider this contrivance necessary in any nor adviseable in all cases. It is hardly necessary to observe, that the evaporating power is augmented by encreasing the diameter of the pipes and the quantity of air propelled by the blowing apparatus through the liquid.

And I do further declare, that as it is desirable that the liquid to be evaporated should be of equal depth in every part of the evaporator, the bottom of which is recommended to be perfectly level, it will be found that the liquid, when sufficiently evaporated and concentrated, does not readily flow out through the spout opened for the purpose. To remedy this inconvenience, I place a vertical sliding plate, four and an half to five inches in height, and somewhat less in length than the breadth of the evaporator or pan, such plate being kept in its upright position by projections at right angles with its lower edge, which must slide as nearly as possible in contact with the bottom of the said pan. This plate is in the first instance put at that end of the pan or evaporator which is opposite to where the spout is situated. When the evaporation is effected to a sufficient degree, I damp the fire, or shut off the steam or hot air, and open the spout to draw off the liquid, a great part of which will immediately flow out. I then, by means of a winch or lever, raise the pipes about six inches, and gently draw the said vertical plate by a thin wire or chain towards the spout, and thus quickly clean the bottom of the pan. It is necessary to raise the pipes in order that the before mentioned plate may pass under them, and at the same time not interrupt the blast of air through the small pipes, which might be obstructed if any of the evaporated liquid should congeal or chrystalize in them by cooling. For effecting these objects, the main pipe, arising from the bellows or blowing apparatus, is inserted into the main pipe in the evaporator in an air-tight manner, but with a joint or flexible tube sufficiently long to allow the system of blowing pipes to slide upwards for about six inches. The form and construction of the apparatus which I use to produce the above effect may be varied according to

circumstances and the form and position which it is to be applied; but two things first of which is, that, however numerous lower orifices should be distributed as surface of the bottom of the pan as possible should issue from the lower end of every. To insure this latter object it is immaterial or boiler be perfectly level, but it is quite the blowing tubes should be on a level and to be evaporated, in order that there may be one tube than in another. The mode of these objects may be various; but in order meaning and my mode of operating, I have apparatus which I have used, and find to A, A, A, A, Figure 1, is a plan or bird's eye B, B, B, the tinned copper or other large air ends C, C, C, but open into each other, perpendicular pipe D, from which the air aforesaid to bellows or other blowing machine lateral pipes which communicate with the bellows towards through the fluid to be evaporated to. The lower ends e, e, &c. of these pipes are each other, to produce the equal distribution.

Figure 2 is a transverse section of the great air pipe D, the cross pipe and its and the small descending pipes e, e, e, e, & likewise the pipes f, f, f, f, which likewise are in a more nearly vertical direction, which view, Figure 1, but by means of which the these blowing tubes are brought to the same B, B, as in other parts of the pan. g, g, g, described system of pipes, by standing on the such length as will just prevent the lower end touching it. The whole of this system of pipes before mentioned, by any adequate machinery or cleansing plate h, h to pass under the end blowing pipes.

Figure 3 is a longitudinal section of the description will be unnecessary, as the same parts in this and the other Figures, the pipes into the pipes B, B being shewn by b

4

I shows the situation near which the discharging valve or orifice should be placed. K, K is the line near which the surface of the fluid should stand, when first introduced to be evaporated. As before mentioned, the form of this apparatus may be varied, provided its essential properties of the air blowing through all the descending tubes, and this being so disposed as to produce greatly divided and equally distributed currents of air over the whole bottom of the vessel at once, are maintained, because my Invention consists in producing rapid evaporation at lower temperatures than usual by the means herein-before described.

A patent was taken out for improvement in the specification was as follows : " My invention as hereinafter described, by which I am enabled to produce solutions at a low temperature, etc. And the process consists in forcing, by means of bellows, atmospheric or any other air, either in a hot liquid solution subjected to evaporation ; and the extremities reach nearly (or within such distance) under peculiar circumstances) to the upper part of a pan or boiler containing such liquid or solution, the pipes being connected with larger pipes, or other blowing apparatus which forces the air to be equally distributed, and their ends are open. It was further declared that the form of the invention provided the essential properties were maintained. Of the specification together, it appears that the particular method or process of forcing, the liquid subjected to evaporation, viz., the air, and placed as mentioned in the specification because another patent had been before for the same object by a coil of pipes (lying in a bath) with small holes, or by a shallow cullend

Motion to enter a nonsuit.

This was an action for damages, judgment held by plaintiff. The patent was granted to W. G. Kneller, dated November 1878, for improvements in evaporation, the plaintiff as assignee. See :

The defendant pleaded not guilty.

Upon the trial before Lord Cairns, the specification of the patent he read, the defendant put in a statement by Richard Knight and Rupert Knight, claiming the invention of a process for the evaporation of fluids at low temperatures by a peculiar mechanical process.

The specification of this patent was read, and said Richard Knight and Rupert Knight particularly describe and ascertain the nature of the invention, and in what manner it is to be carried into effect, as follows ; that is to say" (the inconveniences resulting from the

fluids by the too rapid access of heat, and proceeded as follows): "To obviate this and similar difficulties, and also for the purpose of facilitating the process of evaporation of fluids in general, we declare this our invention to be peculiarly adapted, and we do hereby set forth and describe the means by which we effect the same; that is to say, we propel a quantity of heated air into the lower part of the vessel containing the liquor, syrup or fluid, whether in a cold or heated state, and cause such heated air to pass through the whole body of the liquor in finely divided streams. The means used by us for heating and applying the air to the fluid are as follows; that is to say, a quantity of air is propelled (by means of a blowing engine, bellows or other machine used for propelling air) through a pipe or pipes (made of lead, copper, iron or other fit material) into the lower part of the copper pan or vessel containing the heated syrup, liquid, fluid or other matter to be operated on, coiled or otherwise accommodated to the nature or form of the vessel, the said coil of pipe within and lying at the bottom of the said vessel being perforated with a number of small holes. The heated air being thus forcibly driven out in minutely divided currents, passes rapidly through the liquid, and according to the quantity and temperature of the air so passing through the liquid, a greater or less quantity of the liquid will be converted into vapor and carried off with the air. In lieu of the perforated pipe, a shallow metallic vessel, of the nature of a cullender, within the boiler, may be connected with the air-pipe; and the cullender being perforated with small holes, the heated air may be driven through this perforated cullender, or any similar contrivance that may best suit the form of the vessel or the nature of the fluid or material to be acted upon."

The specification then described how the heat might be applied, and proceeded thus: "We further declare that our invention consists in the application of currents of heated air, when forced or made to pass through the body of any fluid for the purpose of producing or facilitating evaporation; and we also declare that the same may be advantageously applied to processes dependent upon the

body of the fluid for the purpose of producing or facilitating evaporation." In like manner, the specification of the second patent (Kneller's) declares that invention to consist "in forcing, by means of bellows or any other blowing apparatus, atmospheric or any other air, either in a hot or cold state, through the liquid subjected to evaporation." This Kneller claims as an original invention, and not as an improvement of a former invention. He then proceeds in a distinct sentence to point out, by way of illustration, one method of effecting his object; "and this I do by means of pipes," etc.; and he gives a description of his apparatus, concluding by stating that "the form of this apparatus may be varied provided its essential properties of the air blowing through all the descending tubes, and their being so disposed as to produce greatly divided and equally distributed currents of air over the whole bottom of the vessel at once, are maintained;" because the invention consists in producing rapid evaporation at a lower temperature than usual by the means before described.

In both specifications, therefore, the invention claimed is that of forcing the air through the body of the fluid in finely divided streams, for the purpose of producing or facilitating evaporation. Neither of them can be considered as patents granted only for the particular apparatus described in each, for in each specification the particular apparatus described is only given by way of illustration of the mode of applying the principle of the invention, and is not confined to that particular form of apparatus. Knight and Kirk's specification describes the object as to be effected by the coil of perforated pipe, or cullender, "or any other contrivance that may suit the form of the vessel or the nature of the fluid to be acted upon." And Kneller's specification also, after describing the method of effectuating this invention, states it to be that of forcing air, either in a hot or cold state, through the liquid subjected to evaporation, by means of an arrangement of main pipes and branch pipes, descending or dipping into the fluid. And here, too, the patentee does not confine the invention to that particular system of apparatus, but expressly states

infringement of which this action was brought, was for certain improvements in evaporating sugar, which improvements were also applicable to other purposes. By the specification Kneller declares that his invention consists in a method or process and certain apparatus as hereinafter described. He does not claim as his invention the principle, but the apparatus, by which the principle of causing evaporation is to be carried into effect; for he states that, by his apparatus, he is enabled to evaporate liquids and solutions at a low temperature. It is evident that the object of the two patents is the same; but the mode of effecting that object is different. The specification continues, "And I further declare that my said invention and improvement consists in forcing, by means of bellows or any other blowing apparatus, atmospheric or any other air, either in a hot or cold state, through the liquid or solution subjected to evaporation." Now it was said that the words which immediately follow, "and this I do by means of pipes," constituted a separate and distinct sentence from those which immediately preceded them, and that the patentee had stated his invention in the preceding sentence, and had claimed the same invention as that described by Knight and Kirk in their specification. But we think that the words, "and this I do by means of pipes," etc., must, in conjunction with those which immediately precede them, be taken to form one entire sentence, and that they amount altogether to an allegation on the part of the patentee that his invention consisted of the method or process of forcing, by means of bellows or any other blowing apparatus, hot or cold air through the liquid subjected to evaporation, this being effected by means of pipes placed as directed in the specification. Now the method described in Knight and Kirk's patent appears to us to be perfectly different. It is either to have a pipe accommodated to the form of the vessel, or a cullender placed at the bottom of the vessel. The method described in the plaintiff's specification is to have a large horizontal tube (near the surface of the liquid), into which there are introduced a number of small perpendicular tubes, descending through the liquid to the bottom

of the vessel, and having their
and parallel to the surface of
forced by the blowing apparatus
large tube to the other end where
the large tube is filled, the air
tubes to the bottom of the vessel
the liquid, and the evaporation
stantly and equally in all parts
is a method or apparatus perfect
and for that method and apparatus
out. We are of opinion, therefore,
rule in this case.

Rule refused.

The version given by Carpmaister
trial and on the argument of the
the above case differs so much
warrant giving it entire. It is
501) :

At the trial many scientific
half of the plaintiff, who described
and the manner in which it was
considered by them to be new
tion was for a mode of blowing
to quicken the evaporation of
means consisted in having material
be evaporated, from which description
nearly to the bottom of the pipes
was forced into the main pipes
ous small streams below the liquid
carrying off the aqueous parts
slightly varied the apparatus by
the plaintiff's specification and
pipes ; but the chief defence was
tion was not new, a previous patent
in 1822 by Messrs. Knight and
and the defendant at the trial
plaintiff's invention and that of
same. The plaintiff's witnesses

tensive trials on the plan described by Knight and Kirk, but that the streams of air could not be caused to flow out with any degree of equality, and that the apparatus was liable to become clogged, and that from the peculiar arrangement of the plaintiff's apparatus, not only were the streams of air equal on all parts, but the apparatus was not liable to be clogged up. His lordship left it to the jury to say whether the two inventions were alike and whether the defendant had infringed, and the jury found for the plaintiff.

On applying for the rule, it was stated that the invention of Knight and Kirk was the same as that of the plaintiff.

The defendant's counsel argued that by the specification of the first patent, Knight and Kirk declared their invention to consist in propelling a quantity of heated air into the lower part of the vessel containing the fluid, and causing such heated air to pass through the whole body of the liquor in finely divided streams, by means of the perforated coil of pipe or cullender, particularly described, "or any similar contrivance that may best suit the form of the vessel or the nature of the fluid," etc. And the invention was further declared to consist "in the application of currents of heated air, when forced or made to pass through the body of any fluid for the purpose of facilitating evaporation." In like manner Kneller's specification declared the invention to consist "in forcing, by means of bellows or any other blowing apparatus, atmospheric or any other air, either in a hot or cold state, through the liquid or solution, subjected to evaporation." This Kneller claimed as an original invention, and not as an improvement of a former invention. He then proceeds in a distinct sentence to point out, by way of illustration, one method of effecting his object, "and this I do by means of pipes," etc. ; and gives a description of his apparatus, concluding by stating that "the form of this apparatus may be varied, provided its essential properties of the air blowing through all the descending tubes, and their being so disposed as to produce greatly divided and equally distributed currents of air over the whole bottom of the vessel at once, are maintained."

In both specifications, therefore, the invention claimed was that of forcing the air through the body of the fluid in finely divided streams, for the purpose of producing or facilitating evaporation. Neither of them could be considered as patents granted only for the particular apparatus described in each, for in each specification the particular apparatus described was only given by way of illustration, and the invention was not confined to that particular form of apparatus. Knight and Kirk's specification described the object as to be effected by the coil of perforated pipe, or cullender, "or any other contrivance that may suit the form of the vessel or the nature of the fluid to be acted upon." And Kneller's specification also, after describing the method of effectuating the invention, stated it to be that of forcing air, either in a hot or cold state, through the liquid subjected to evaporation, by means of an arrangement of main pipes and branch pipes descending or dipping into the fluid. And here, too, the patentee did not confine the invention to that particular system of apparatus, but expressly states that the form of the apparatus might be varied, provided its essential properties were maintained, "because," it goes on to say, "my invention consists in producing rapid evaporation at lower temperatures than usual, by the means hereinbefore described." Kneller should have stated his invention to consist in having the mains to feed the smaller pipes to introduce streams of air for the purpose of producing evaporation. But he took out a patent for doing that which might lawfully be done by the patent granted to Knight and Kirk. He did not confine himself by the words, "and this I do by means of pipes," to the particular method pointed out; he claimed as his invention the principle of producing evaporation at a low temperature, by forcing with a blowing apparatus streams of air through the liquid. But assuming that, after the verdict, Kneller's patent be taken to be an improvement upon the method disclosed in Knight and Kirk's patent, Kneller ought to have set out his patent for that improvement only.

Their lordships took time to consider their decision. Lord Tenterden, C. J., observing, I cannot find

that I think a great deal too much critical acumen has been applied to the construction of patents, as if the object was to defeat and not to sustain them.

Lord TENTERDEN, C. J., on May 5, 1831, delivered the judgment of the court. The objection to this patent is the production of the specification of a previous patent, which in substance is an invention of a process for the more rapid crystallization of sugar, and for the evaporation of fluids at comparatively low temperatures. This object is effected by means of a coil of pipes, lying at the bottom of the vessel, perforated with small holes, and thus operating on the liquid, or by a shallow cullender placed at the bottom of the vessel. It was proved that a pipe employed and acted upon in the manner described in the specification, viz., by forcing the air at the end of it, would accomplish that object.

The patent on which the plaintiff relied, and for the infringement of which this action was brought, was for certain improvements in evaporating sugar, which improvements were also applicable to other purposes. By his specification, Kneller declares that his invention consists in a method or process, and certain apparatus as thereafter described. He does not claim as his invention the principle, but the apparatus, by which the principle of causing evaporation is to be carried into effect; for he states that by his apparatus he is enabled to evaporate liquids and solutions at a low temperature. It is evident that the object of the two patents is the same, but the mode of effecting that object is different. The specification continues, "And I further declare that my said invention and improvement consists in forcing, by means of bellows or any other blowing apparatus, atmospheric or any other air, either in a hot or cold state, through the liquid or solution subjected to evaporation." Now it was said that the words which immediately follow, "and this I do by means of pipes," constituted a separate and distinct sentence from those which immediately preceded them, and that the patentee had stated his invention in the preceding sentence, and had claimed the same invention as that described by

Knight and Kirk in their specification the words, "and this I do" in conjunction with those which are to be taken to form one entire allegation altogether to an allegation that his invention consisted of the use of air by means of bellows, or any other cold air through the liquid being effected by means of the specification. Now the method in Kirk's patent appears to us to be either to have a pipe connected with a vessel, or a cullender placed over the vessel. The method described in the specification is to have a large horizontal tube into which there are introduced pipes descending through the liquid and having their lower ends near the surface of the fluid. The blowing apparatus from the other end, which is closed, and the tube is filled the air descends to the bottom of the vessel, and the evaporation is the same equally in all parts. It appears to me that the method and apparatus perfectly distinct from the method and apparatus the plaintiff has used, and I am therefore of opinion that there is no infringement.

Rule refused.

JONES v.

Chancery, V. C.

Injunction. Grant.

Preliminary injunction will not ordinarily be granted in a case where plaintiff can be protected by damages.

Application for injunction.

Jones, the plaintiff herein and in the action at law reported as the later case (*post*, p. 472), applied in this suit for an injunction to restrain the defendant from continuing his infringement of the patent described in the next case. An issue at law was thereupon arranged; and the defendant undertook to plead to a declaration, and to keep an account of all moneys received concerning plaintiff's alleged invention.

SHADWELL, V. C. Where an undertaking by the defendant to keep an account will afford the court ample means of doing justice to the plaintiff, should his legal right be established, the court rarely grants the *interim* injunction. The profits made by the defendant are generally no very inadequate compensation to the plaintiff for infringement. But should it turn out, as it not infrequently does, notwithstanding the favorable opinion the court may entertain of the plaintiff's case, that nevertheless he was not entitled to the injunction, in what way can the court compensate the defendant?

Let this motion for an injunction stand over until after the trial of the action, the defendant undertaking to keep an account of all moneys received by him in respect of his having sold carriage-wheels constructed upon the principle of the plaintiff's invention.

BROOKS v. RIPLEY.

Common Pleas, 1831.

Explaining a Doubtful Specification by Testimony is not Allowable.

Webster (Pat. L. Dig., No. 102) mentions the following decision: "If the specification be not sufficiently clear to be understood by an ordinary workman (a witness for the plaintiffs), witnesses will not be allowed to be called to explain the intention of the patentees, and the plaintiffs will be nonsuited." Per Lord Lyndhurst C. B. *Brooks & Hargrave v. Ripley & Ogle*. No materials have been found for a complete report of the case.



FIG. 19.

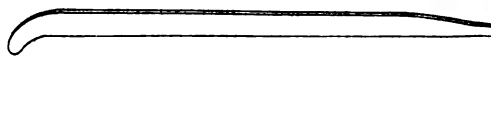


FIG. 18.

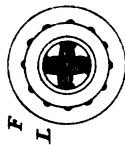


FIG. 17.



FIG. 16.

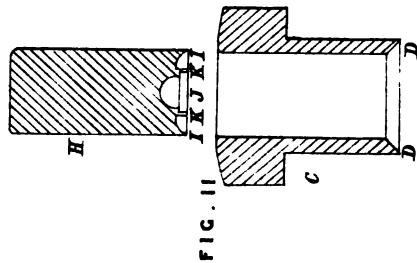


FIG. 27.

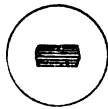


FIG. 28.



FIG. 26.

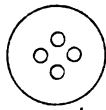


FIG. 7.

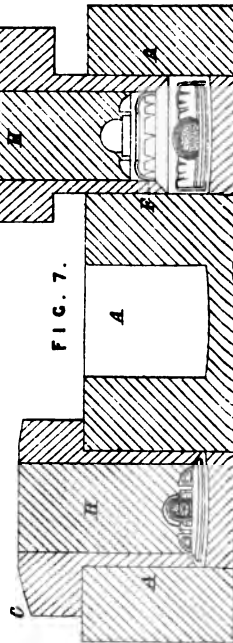


FIG. 29.

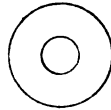


FIG. 30.

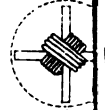


FIG. 33.



FIG. 39.

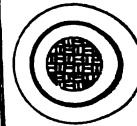


FIG. 36.



FIG. 32.

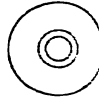


FIG. 40.



The enroled drawing is colored

Sanders' Improvements in Making Buttons.

My said improvements in the constructing or making of buttons consist in the substitution of a proper soft and flexible material or materials in place of metal shanks upon the backs or bottoms of buttons of certain descriptions, and which said flexible material or materials afford the means of affixing such buttons to garments of every description with far greater convenience and neatness than where metal shanks are employed. The descriptions of buttons above mentioned are such as I have manufactured under a Patent granted for me by His late Majesty King George the Third, dated the Fourth day of November, in the fifty-fourth year of the reign of His said late Majesty, for my Invention of a New and Improved Manner or Method of Manufacturing Buttons; and as such method is peculiar to me, I shall proceed to furnish such a description thereof as is necessary to the proper understanding of my present improvements thereon, accompanied by explanatory Drawings, as aforesaid, as my experience have enabled me to afford.

My said buttons have their faces, edges, and either a part or the whole of their backs formed of circular pieces of cloth, or other flexible fabric capable of being acted upon by compression with or without the assistance of heat. Some of these said pieces are to be cut of a larger diameter than that of the mould in which they are to be formed, in the manner to be described hereafter; and in order that such pieces may be bended over behind or at the backs of the buttons by the pressure of the hollow cylindrical and conical punch upon them, as will also be described hereafter. And I do place upon or within the said flexible pieces of such buttons one or more pieces of paper, pasteboard, cloth, or other fit material, covered or slightly impregnated with resin, or resinous compounds capable of giving cohesion or configuration by heat and pressure; or with some glutinous or other adhesive matters or compounds capable of effecting the same purposes, and either by the combined action of heat and pressure, or by pressure alone. And I form the said pieces so covered or impregnated either nearly of the size of the button itself, or gradually or otherwise diminishing in size according to the flat or rounded form intended to be given to the face of the said button. I next place at the top of the said impregnated pieces a piece or pieces of metal or other firm and unyielding material, around, through, or over which the soft and flexible material or materials to form the substitutes for the metal shanks are to be applied. I then place these parts so arranged on the top of the mould and concentric with it, and then force or drive them down to the bottom of it by means of a tool or implement which I term a charger or conductor; as, however, it is difficult to convey an idea of the forms of the different parts by words alone, I shall proceed to refer to and to describe the various Figures thereof contained in the Drawing, which, as aforesaid, is affixed to this Specification, and in all of which said Figures the same letters of reference indicate

the similar parts. I shall begin by describing the Figures of the several parts already mentioned.

Fig. 1 represents the circular piece of cloth or other flexible fabric, which, as aforesaid, is to form the face, edge, and part of the back of an intended button. Fig. 2, a circular piece of paper, linen, cotton, or other flexible material, rather less than Fig. 1, but larger than the intended button, and which I occasionally interpose between the cloth or other material forming the face of the intended button and the impregnated papers. In order to prevent the adhesive matters they are impregnated with from penetrating through the face or edge of the button, I make this paper rather lesser in diameter than Fig. 1, in order to allow the adhesive matter with which another circular piece of paper, &c., Fig. 3, is impregnated to adhere to the outer circumference of the cloth, Fig. 1, upon the piece of impregnated paper, Fig. 3, which is of the size of Fig. 1, and is to be laid upon the plain paper, &c., Fig. 2, one or more smaller pieces of impregnated paper, pasteboard, &c. Figs. 4 and 5 are also to be laid according to the intended flat or rounded form to be given to the face of the button. And lastly, either the metal plate, Fig. 6, with four slits or caps in it, formed in the manner to be hereafter described and wound crosswise with the soft and flexible material which is intended to form the substitute for the metal shank, is to be placed in contact with the inner piece of impregnated paper, or else one of the other substitutes for it, as will be described hereafter. The various pieces thus arranged and placed upon each other in the order described, and as nearly concentric as may be, are then to be laid upon the top of one of the cylindrical moulds, A, A, A, shown at Fig. 7, being guided centrally by a circular groove B made around the cylindrical hole for that purpose, and as shewn in the plan, Fig. 8. In this situation of the pieces I employ the cylindrical charger or forcer, Fig. 9, to thrust them down to the bottom of the mould, and to cause those circular portions of Figs. 1, 2, and 3, which, as before said, are of greater diameter than the intended button, to rise up between the mould and the forcer, and to take the cylindrical shape shewn in Fig. 10, the forcer being made smaller in diameter than the mould to allow thereof. This forcer may be made of steel, iron, or other proper material, and either have a cushion formed on its top, as shewn, or not, at pleasure. I next employ the steel hollow cylinder (termed a spindle in my former Patent), shewn in section at C, in Fig. 11, which is made so as exactly to fit and fill the cylindrical mould A, and has its mouth below opened to a conical shape, as shewn at D, D, the edge around it being made as perfect or sharp as may be. This circular edge insinuates itself all round behind the outside of the raised circular portions of the pieces 1, 2, and 3, and on pressure being employed bends them over at the back of the intended button, in the manner shewn at E, E, in Fig. 12. In order to confine and secure them in this position, I next employ the collet or metal-toothed ring F, shewn edgewise in Fig. 13, and flatways in Fig. 14, and by a line of section in Fig. 15, and which, when conveyed into the mould in the

these flat pieces are then to be raised or cupped in their centres as shewn edgewise in Fig. 21 and in Fig. 22 by means of proper dies and forcers. The toothed metal collet F, shewn in Figs. 13, 14, and 15, is also formed out of rolled or sheet metal, pierced, pressed, or cut out in the manner already described into the flat star-like shape, shewn in Fig. 23. The teeth, claws, or points G, G, formed around it are next turned up at right angles to the plane of the collet or ring, as shewn in Fig. 13, and by a sectional line in Fig. 15, by forcing them through circular holes made in proper beds by the help of cylindrical punches affixed in a screw or fly press. The relative proportions of the metal plate with slits in it, Fig. 6, and of the toothed ring or collet F, suitable for the size of button shewn, may be seen by referring to Fig. 24. The chief intent of raising up the centre of the plate, Fig. 6, is to cause the tuft of flexible material or materials forming the substitute for the metal shank to be elevated sufficiently above the top of the back of the toothed collet F for the needle to be passed conveniently through the said tuft in the act of sewing the button upon the garment. Fig. 25 represents the manner in which I give the first pressure upon three cylindrical rings C, C, C, placed in the three moulds A, A, A (shewn by dotted lines) of the block M, at once, and of avoiding to press upon the three solid cylinders H, H, H, at that time. This I effect by placing upon the three cylindrical rings C, C, C, the metal block or bar N, having three gaps or hollows O, O, O, formed across the under side of it to receive the solid cylinders H, H, H, within them, and to defend them from the action of the press. Having thus given the first pressure, I then remove the block N, and submit the three solid cylinders H, H, H, to pressure effected upon their upper ends until they are forced down level with the tops of the cylindrical rings C, C, C, as shewn on the left side of Fig. 7, to complete the button. I can either employ screw presses, vices, weighted levers, wedges, or any other proper means of effecting this pressure, and of retaining the buttons under that operation for a proper length of time, or until they are become set and firm enough to be taken out of the moulds by the hook shewn at Fig. 19, as already described, when if the face of the button has any glass upon it, that may be removed by a slight damping.

Having thus shewn the manner of forming a button complete, I shall proceed to describe certain other methods of making the other flexible substitutes for the metal shanks mentioned in the preceding part of this my said Specification. Fig. 26 represents a circular metal plate, having four holes made in it near its centre; through these holes, with the help of a needle, I pass the soft and flexible material or materials intended to form my said substitutes for metal shanks across and across, in the manner shewn in Fig. 27. These metal plates may either be used in the flat form, or their centres may be raised or elevated, as shewn by the section in Fig. 28. Another substitute form in the following manner:—Fig. 29 is a flat metal circular plate with a circular hole in its centre large enough to admit the tuft of mate-

manner:—First, as before, I take the cloth or outside covering of the button, Fig. 1, and place upon it the circular piece of paper or other material, Fig. 2, and likewise the impregnated pieces, Figs. 3 and 4. I next lay upon them the plain circular metal plates, Fig. 37, and upon that another impregnated piece, Fig. 5; in order, however, to cause the woven flexible substitute for the metal shank to rise up above the surface of the metal collet F, I place upon the impregnated piece Fig. 5, one, two, or more small circular pieces of baize or other soft and elastic material, such as shewn in Fig. 38, and upon them I lay the woven substitute for the metal shank Fig. 36, and with these various materials arranged in the order described, I then charge the moulds A, A, &c., by means of the cylindrical charger or forcer Fig. 9, in the manner already described; and lastly, introduce the metal-clawed collet F, and induce pressure with heat, exactly in the manner above mentioned; and the button when finished will appear of the form represented in Fig. 39, which is a view of the back of it, and edgeways at Fig. 40; or instead of using a circular piece of crossed or woven threads or twist, I can employ a circular piece of leather in a similar manner.

I again repeat that I hereby claim as my Invention, and the object of this my said Patent, the substitution of a proper soft and flexible material or materials in place of metal shanks to all such buttons as may be formed in the various methods herein described and set forth.

sewn to the garment. The plaintiff in his patent described a mode of making covered buttons by means of dies and pressure, and which was accomplished by introducing the covering material, whether of woven fabric or thin sheet-metal, into a hollow die, and then by pressure, aided by adhesive matter, to cause the whole of the parts to combine, the back metal plate having a bent wire shank fixed thereto. It was also shown that the present patent of 1825 produced a great change in the manufacture of covered die and pressure-made buttons. The novelty of those made under the patent consisting in forming the back shell or collet with a hole through in such manner that a tuft of strong woven fabric might be caused to protrude through the hole, forming thereby a shank, but the specification also described means of making other shanks, by winding thread or cord on a circular disk of metal, wood or other matter, and then enclosing such shanks in die and pressure-made buttons. It was proved that these descriptions of shanks had been made many years before the patent, and they had been covered with thin sheet-metal on the front surfaces, which overlapped the backs of the buttons, simply leaving the crossed thread or string to form a shank. It was therefore stated that covered buttons had been made before the patent with flexible tufts or shanks within the meaning of the patent, and therefore the patent was void.

His lordship nonsuited the plaintiff, with leave to apply to have the nonsuit set aside, and a verdict entered for the plaintiff. A rule *nisi* was subsequently obtained, and the case now came on for argument.

For the defendant, it was contended that the specification of the patent of 1825 claimed more than was new. It was clear on the evidence that some of the flexible shanks claimed were old, and they had been used in metal-covered buttons before 1825, and as the first patent included metal-covered buttons, the present invention was, by the new specification, claimed as applicable to all covered buttons, whether of woven fabric, or where the fronts of the buttons were covered with metal, which were made according to the first patent, and therefore the patent was bad. The

patent refers to something not new ; all, or almost all, perhaps quite all, of that part of the specification which relates to the mode of putting on the flexible shank is not new. He does it by various methods ; one is by having four holes, another by a cross, another by a single hole ; and it appears by the evidence given on the part of the defendant, that buttons with flexible shanks have many years ago been made in each of those ways. What then is the novelty ? At one time it is contended—and it was contended by Mr. Hill, as I thought, very ingeniously at the close of the argument—that the novelty was the mode of using, the mode in which the flexible shank was united to the other. That mode is certainly by a collet, and it is by a collet with teeth. Now that a collet, speaking of it absolutely, is not new, is perfectly correct ; it had existed in the original patent. But it is said in the original patent, the collet could be of no use, that is, that it would be less in common use, except by opening the metal shank which kept it in its place. I can find nothing of that kind in the specification of the first patent. I find the collet mentioned, and it says that “by a second pressure on the counter spindle I force down the collet, and thereby give the button its form, which I then take out, and open the shank with a bodkin, and take off the gloss of the face by a slight damping.” There is not one word of the finishing the button by means of that collet ; it is not stated that it has been the means. I apprehend the strong pressure that is used on the collet in that state in which it had no teeth contributed mainly to the keeping it in its place. Now, what is said as to the collet in the second specification ? Is any reliance placed on that in the part of the specification which is as to the making of it ? He says he employs the collet which has to be conveyed into the mould in the manner described, which is precisely the manner in which the old collet is conveyed into the mould ; then he says “with its circle of teeth, claws or points, *a, g,* downward.” Then he says, “The points seize hold of and penetrate into the pieces so bent over, and when the final pressure is given, as will be described hereafter, they materially serve in contributing to

It has been said that this is done by means of the collet, and that the collet is a new invention ; but with regard to that, that is not claimed in the specification. It is merely asserted, and on the part of the plaintiff it is now stated, that the toothed collet was not the object of his invention, but it was only the mode of carrying it into effect, and at the conclusion of the specification the only claim is in respect of a flexible shank, and the whole is to be considered as an entire mode of making a button. What is the effect of this toothed collet? Why, it is a very ingenious contrivance, but at the same time the defendant has adopted another mode, which seems to answer the same purpose. It seems to me, therefore, on these grounds, the patent cannot be supported, and that the nonsuit was right.

PARKE, J. I am also of opinion in this case the rule ought to be discharged. I was not in court at the time this motion was made by the Attorney-General, but I have had an opportunity of looking at the things and at the specification, and of consulting with the rest of the judges on this occasion, and I certainly am inclined to think that, though not in form, yet in substance, the claim was for a new method of fastening together the pieces of an old button, by means of clenching the teeth of the collet, which certainly was an ingenious invention. And though at first I thought, in terms, the specification did not claim that, yet looking at it altogether, I thought it did claim it in substance ; but then I was not aware what mode the defendant had used to accomplish the same object ; but looking at the specification more carefully, I very much doubt if that impression was correct. I incline to think not. If you look to the language of it, it does not refer to the collet as an essential part of the invention. It begins by saying, " My said improvements in the constructing or making of buttons consist in the substitution of a proper, soft and flexible material or materials, in place of metal shanks upon the backs or bottoms of buttons of certain descriptions, and which said flexible material or materials afford the means of affixing such buttons to garments of every description, with far greater convenience and neatness than where metal

Though the plaintiff may be entitled to specify, and his patent may entitle him to fix this by a toothed collet, yet on the ground that I have mentioned, the nonsuit ought to be sustained.

TAUNTON, J. The patentee declares in his specification that his "improvements in the constructing or making of buttons consist in the substitution of a proper, soft and flexible material or materials in place of metal shanks upon the backs or bottoms of buttons of certain descriptions." That is the object therefore of the patent,—the substitution of a flexible material in place of metal shanks. Now the using of a collet with teeth or claws upon it is one of the methods by which that substitution is to be carried into effect; that appears to be the only thing that has any novelty in it. The defendant has not adopted that, he has made use of another mode of fixing the collet. He does not use the collet with claws or teeth, but he makes use of some other mode of compressing the materials and confining them by means of a collet. It does not appear to me the defendant has been guilty of an invasion of the patent of the plaintiff, and therefore I think the rule ought to be discharged.

Rule discharged.

JONES v. PEARCE.

King's Bench, N. P., June 27, 1832.

Novelty. Utility. Previous Experiment. What constitutes Infringement.

An experiment, found impracticable and abandoned, will not vitiate a subsequent independent invention.

Making the patented article is an infringement unless the making is for diversion or for a mere model.

Trial of an action for infringement.

The patent in question was granted to the plaintiff, Theodore Jones, dated October 10, 1826, for improvements in wheels for carriages.

Scarlett stated the plaintiff's wheels as made entirely of iron suspension, that is, the weight of the rods being made without sharp parts where they entered the wheels, so that on the least pressure from the felly to slip upward into the nave) without the aid of any parts of the wheel.

The witnesses for the plaintiff stated that the wheel was constructed on the principle of relieving the lower rods or spokes of the weight bearing tension on the upper ones, and that he knew the principle usefully applied in the invention of the sort in use, and that it was obvious to the plaintiff's patent. He stated that the nuts were important features of the invention; that the felly was a well-contrived nicety; that the wheels were destroyed in a very short time; that the invention was of great lightness and durability, and was in general use; that one firm, by the use of the invention, for the supply of wheels, would supply the whole of the year. On cross-examination a witness for the defendant, which witnesses admitted to be a witness for the plaintiff's, which principle (in the plaintiff's invention) consisted in the use of iron rods instead of spokes, by which is hung the weight of the load from that part of the wheel which is the strongest, most, and prevents any support being given to the felly by the rods which happen to be broken; but stated that a wheel of the defendant's model could never be used; that the defendant's if it could be used it would be a violation of the plaintiff's patent; also, that the plaintiff's principle was applicable to both wheels, but that the defendant's was more secure; that the only difference between the plaintiff's the nuts have to be changed go quite through the felly.

The plaintiff's foreman stated that at the defendant's premises a pair of gig-wheels

on the suspension principle ; the felly, however, was of wood, bound round with an iron tire or rim. The nave was of wood, bound with wrought iron. The spokes or rods were without shoulders at the outside of the nave, but within they were fastened with nuts. The suspension principle was the same as the plaintiff's, but the nuts were not divided into cells like his ; nor could he tell how the rods were inserted into the wooden felly, because of the iron tire which was on its outside ; their heads did not come through the tire, they were hid. He only saw two wheels ; one was on the gig, the other against the wall ; it had no shield, but it appeared as if there was going to be one. He did not notice the screws to fasten the shield.

Campbell, for the defendant, contended, 1. That the invention was not new, wheels according to the model which was produced having been invented by a Mr. Strutt in 1814, made under his orders, and publicly used near Derby for two years ; 2. That there was no infringement, the defendant's wheel, according to the evidence, being differently constructed ; 3. That the specification did not confine the claim to any particular mode of constructing wheels on the suspension principle, but expressly claimed the invention of the principle itself.

The judge overruled the latter objection, being of opinion that, on the specification taken as a whole, the claim was for the invention of a method of making wheels on the principle of suspension, which method was described in the specification.

Witnesses for the defendant stated that they had made in 1814, for Mr. Strutt, a pair of wheels of which the model put in was a rough model ; that the wheel had been put to a cart and used for carrying heavy loads of stones (30 cwt.) on the public roads for upward of a year. The spokes occasionally got bent, and the box or nave becoming broken, the cart was laid by. A pair of these wheels, three feet high, were used on a milk-cart for carrying the milk, every morning, of from thirty to fifty cows, from one of Mr. Strutt's farms to his factory, where the milk was sold to the work-people. The wheels of this milk-cart were on the suspen-

sion principle, and the spokes of the strings of a drum. The rods were at the heads, where they were wedged at the edge of the wooden felly, and were in the felly. Over the felly were spokes or rods were frequently worked until the iron tire was Counter-sinking and conical had different terms.

Scarlett, in reply, contended that the defendant's Case (*ante*, p. 9), and p. 417), that the defendant's evidence of Strutt's wheel, or public suspension as applied to carriage was the plaintiff's right to a patent.

PATTESON, J., having summed up as follows: If on the whole of one side or the other, it appeared by Strutt's order in 1814 was principles, and in substance the same which the plaintiff has taken out and used openly in public, so that he had continued to use the same without taking out the patent, undoubtedly ground to say that the plaintiff's if it is not new, of course his patent recover in this action; but if, of opinion that Strutt's was a patent found it did not answer, and ceased abandoned it as useless, and remained and that the plaintiff's invention was his own invention, and remained so say, although he knew nothing of the defects of Strutt's wheel for saying the plaintiff's patent entirely upon what is your opinion respect to that, because, supposing it is a new invention of the plaintiff

good ; then the only remaining question would be whether the defendant has or not infringed the patent.

Now, as I have told you before, it seems the defendant has constructed a wheel whose construction is on the suspension principle. That alone would not make it an infringement of the plaintiff's patent, because the suspension principle might be applied in various ways ; but if you think it is applied in the same way as according to the plaintiff's patent it is applied, then the want of two or three circumstances in the defendant's wheel, which are contained in the plaintiff's specification, would not prevent the plaintiff's recovering in this action for an infringement of his patent. It would be quite a different thing if it was shown that the defendant had his communication long before with Strutt, and had taken up Strutt's invention in Derbyshire, and had constructed something like Strutt's without any knowledge of the plaintiff's patent, and had actually borrowed it from Strutt's, which was good for nothing. It would be the hardest possible thing to say that this was an infringement of the plaintiff's patent ; but it merely comes to this by reason of the variance between the defendant's and the plaintiff's ; it is only less useful and less durable, but is in effect the same thing. Then the two points for your consideration clearly are these : whether the plaintiff's invention is new, and, if new, whether the defendant has so constructed his wheel that it is an imitation of the plaintiff's patent. If you are of opinion for the plaintiff on both these points, your verdict will be for the plaintiff ; but if you are of opinion on either of those two points against the plaintiff, then your verdict will be for the defendant. But you will be so good as to tell me upon what ground it is—whether it is upon the ground that the plaintiff's invention is not new, or upon the ground that the defendant's is not an infringement, because it may make a material difference hereafter.

[In reply to a question from the jury, whether there was any evidence of the defendant having used or sold the wheels, PATTESON, J., said, The terms of the patent are, "without leave or license, make," etc. Now if he did

actually make these wheels, his making them would be a sufficient infringement of the patent, unless he merely made them for his own amusement, or as a model.]

Verdict for plaintiff.

Webster, commenting on this case, says :

The preceding is of importance in illustration of the cases which arise on the words of the statute and of the letters patent as to what in law constitutes such a user as will vitiate a grant ; it is also applicable to the question whether the plaintiff was in law the true and first inventor. There was no user at the time of the grant, the evidence being that Mr. Strutt's wheel was abandoned ; but it was clearly established that he had applied the same principle before. Then arises the question whether the construction put by the learned judge on the specification was the correct legal construction. (See also p. 000.) The material question, however, was, whether, supposing the true construction of the specification to be that suggested by the counsel for the defendant, the plaintiff was in law the true and first inventor within the meaning of the statute and the letters patent. An invention may be new as to public use and exercise, but the grantee may not be the true and first inventor. There is a material distinction between these two questions.—1 *Web. P. C.*

DUVERGIER v. FELLOWES.

House of Lords, July 3, 1832.

Engagement to violate Patent, Illegal. Condition of Bond.

No action can be maintained on a bond given to a person in consideration of his doing something contrary to the terms of the letters patent ; and he is equally incapable of recovering whether he knew or did not know the terms of the letters patent.

The illegality of the condition of the bond may be shown by the plaintiff in stating the bond itself, with the condition, in his declaration ; or if he omit to state the condition, it may be shown by the defendant in his plea, and the court will equally take notice of the illegality in either case.

Error to review a judgment of the King's Bench.

The facts of the case are given in same case, same title (*ante*, p. 445), and in the courts of King's Bench and Common Pleas. The plaintiff brought a writ of error, praying that the House would reverse both of these judgments.

Follett and *Smirke*, for the plaintiff in error, contended that the plaintiff's right of action in this case was on the

obligatory part of the bond, and that the condition of the bond would not prevent him from recovering unless the condition were in itself illegal. It was said that the whole transaction was a fraud upon the public. There was, however, no allegation of that sort in the pleadings, which merely put the case on the ground of want of consideration ; and even if the transaction was fraudulent, it was doubtful, on the face of these pleadings, whether the plaintiff was not the victim instead of the practiser of the fraud. Now, in order to deprive the plaintiff of his right to recover on this bond, it must be shown that he was a guilty party in the fraud. This was stated to be a monopoly contrary to the common law. Lord Tenterden, in the judgment in the court below, said, "I am of opinion that the proviso in the patent has the effect of rendering the bond altogether void ;" and Littledale, J., added, "All monopolies are illegal unless allowed by a patent, which cannot be assigned at all unless power to that effect is given by the Crown." What was a monopoly ? It was thus defined by Lord Coke, 3 Inst. 181 : "A monopoly is an institution or allowance by the king, by his grant, commission or otherwise, to any person or persons, bodies politic or corporate, of or for the sole buying, selling, working, etc., whereby any persons, etc., are sought to be restrained of any freedom or liberty in their lawful trade." If there were no legal means of assigning this patent, it would become void as soon as it was assigned ; but if it could be legally assigned, then it became a legal monopoly. If it was possible for this court to discover a legal mode of carrying on business, they would not presume that the parties were actuated by an illegal intention. The mystery alone did not make the business illegal, for mystery was almost a synonym with trade ; and an indenture of apprenticeship bound the master to teach the apprentice the mystery of his art, and bound the apprentice to keep the secrets of the master. The impossibility of the engagement did not make it illegal. Suppose a man bound himself to a society, to secure for them the exclusive enjoyment of light and air, the engagement on his part would be impossible, but not illegal. The cases of

that the letters patent were not assignable ; that of the Court of Common Pleas referred entirely to the illegality of the attempt to divide the benefit among more than five persons. There was nothing on the face of the bond that would make it illegal. It was said that the plaintiff must know that to form a company of more than five persons for the purpose of working this patent was illegal ; but there was not one of the pleas which stated his knowledge of the terms of the patent, or which showed that he was at all aware of the illegality. The king might grant a patent without such a restriction as existed in the present case, and there was nothing to show that the plaintiff knew the king had not done so here. The plaintiff had done all he had undertaken to do, and was therefore entitled to the stipulated compensation. If the condition was illegal, then certainly the bond must be admitted to be void ; but if the condition was only impossible, it was then turned from a bond with a condition to a simple bond. Touchstone (372) and Bacon (Abr. Obligation, E. 1) were authorities on this point. The want of power to assign was not a defence to an action on the obligatory part of the bond. The plaintiff need not have averred performance of the condition : the defendant must show its non-performance by way of defence. Suppose the bond had been on condition that the plaintiff should procure a purchaser for the estate of the defendant. If it should turn out that the estate was not salable, that would not be an answer to the plaintiff's claim ; nothing short of a contrivance to cheat and defraud, in which the plaintiff was a party, would be an answer to the action. There was no allegation of that sort in the present case. The 6 Geo. I. was repealed before this bond was entered into, and it was to be observed that all the authorities were cases under that statute, yet even in those cases the merely making the shares transferable, or seeking to act as a corporate body, had not been held to be illegal. The King v. Cawood (2 Lord Raymond, 1361) and the King v. Dodd (9 East, 516) were cases on the statute. In the latter of these it seemed to be the opinion of the court that the intention of forming a company would not be within

the statute, without reference to the fact of such intention having a tendency "to the common grievance," etc., in the particular instance. The next case was the *King v. Webb* (14 East, 401). In the sixth count of the indictment there, everything was to be found which appeared in the pleas here, yet Lord Ellenborough held that the offence there charged was not within the statute. The case of *Pratt v. Hutchinson* (15 East, 511) was also a case upon the statute, and in that case BAYLEY, J., said, "The plea does not allege generally as a question for the jury that this society was prejudicial to the public at large." There was no pretence for saying that the statute applied to the present case. The only question therefore was whether the company was illegal at common law. That depended on the meaning of a dictum of Lord Abbott, C. J., in *Josephs v. Pebrer* (3 Barn. & C. 644), "that trafficking in these shares may very possibly have been illegal at common law, inasmuch as it was bargaining and wagering about an act of Parliament to be obtained in the future." That point did not arise in the present case at all. The pleas stated that the company intended to act as a corporation without the charter of the king, but they did not say anything about an act of Parliament. Yet it was manifest that no shares would be subscribed for till the terms of dividing the profits had been made one of the consequences of creating the shares. There was not enough in these pleas to show that the undertaking, or the formation of the company, was so illegal as to prevent the plaintiff from recovering.

Lloyd, for the defendants in error, was not called upon.

LORD TENTERDEN, C. J. It appears to my judgment that this case is so plain that it will not be necessary for your lordships to hear any further argument upon it; and I am the more satisfied with my own opinion as all the judges who are now present agree in that opinion. They all agree that the judgments of the courts below ought to be affirmed. Your lordships happen to enjoy this advantage,—that six or seven judges are now present, not one of whom was a judge of either of the courts below when the judgments appealed

from were given, and consequently are not influenced by their previous opinions. This is an action of debt on bond, to which the defendant has pleaded three pleas, which, after argument on demurrer in the Court of Common Pleas, and after writ of error in the Court of King's Bench, both courts held sufficient to bar the action. His lordship stated the nature of the patent and of the condition thereto annexed. The condition is large, and is expressed in such a manner as to embrace almost every case that could be put of an assignment to any number of persons exceeding the number of five. "If the patentee or his agent should receive any sum of money from any number of persons exceeding five, for the purpose of dividing with them the benefits" of the patent, then it should be void. The plaintiff only set forth the obligatory part of the bond, not the condition. The defendant stated the condition, and it is to this effect,—that the plaintiff shall procure nine thousand subscribers to form a company, to whom the defendant and two other persons shall part with the business they were then carrying on under the patent. It is therefore clear that, on the condition of the bond, this plaintiff was not entitled to any money unless he formed a company and procured nine thousand shares to be taken, and unless he obtained payment of the first instalment. If the plaintiff, instead of confining himself to the statement of the obligatory part of the bond, had set out the condition of it, he would necessarily have shown a breach of the condition of the patent and would have alleged enough in his own declaration to show that he could not maintain the action. But whether the action comes before the court on the plaintiff's declaration or on the defendant's plea, is a perfectly nugatory distinction. The fifth and sixth pleas aver the intention of the parties to vest the interest in more than five persons; the seventh plea introduces something else, and alleges that it was intended, at the time of making the bond, that the company should consist of more than five persons, that they should act as a corporate body, and divide the benefit of the letters patent. The supposed illegality is put, therefore, on two grounds,—1, that taken on the fifth and sixth

Ex parte HENSON, *in re* ALCOCK.

Before the Lord Chancellor, Dec., 1832.

Opposing Grant of Patent.

The Lord Chancellor in his discretion will entertain opposition to sealing a patent after the regular time for opposing has passed.

Proper practice in such a case stated.

Application on a caveat lodged by Henson against sealing letters patent to Alcock for improvements in machinery for making bobbin net lace.

Henson stated on affidavit his belief that the invention for which Alcock was soliciting letters patent was the deponent's invention, and which he had communicated in confidence to Alcock, who was his nephew.

It was argued on the part of Alcock that Henson had no right to oppose at this stage, the time for opposing having gone by, the Attorney-General having issued his bill.

Lord Chancellor BROUGHAM. I cannot look at this case, and deny that they (the agents of Henson) have a strict right to be here, but it is a right which must be exercised very sparingly, and a discretion must necessarily be vested in the court. In the very peculiar circumstances of this case, I am disposed to give them the benefit of it, exercising it in a somewhat roundabout way by sending it to the Attorney-General; but the very circumstance upon which that suspicion rests leads me to reserve the question of costs.

The case was then sent for the decision of the Attorney-General as to whether the inventions were the same, the Lord Chancellor observing that it was in the nature of an inquiry before the Attorney-General to assist the conscience of the court to see whether the sealing should go. It was then agreed that the Attorney-General should report whether the patent should be granted, and that what was produced before him should be enrolled as the specification.

The Attorney-General directed that the patent should be

sealed, the improvements being dissimilar to those of Henson, and not infringing upon his inventions. The letters patent were sealed as of the day on which they came to the great seal.

HAWORTH v. HARDCASTLE.

Common Pleas, After Mich. T., 1833.

Novelty. Utility.

A ruling (contrary to *Brown v. Annandale*, February 25, 1842) that machines might be patented in England notwithstanding prior use in Scotland.

Instance of a verdict that an invention was new and useful, but not useful in some cases.

Trial of an action for infringement.

The patent in question was granted to William Southworth, dated April 19, 1823, for apparatus for drying calicoes, linens, etc.

Upon the trial *Wilde*, with the aid of models, described the invention and explained that before it was introduced, in houses or rooms for drying fabrics, a sort of open floor was constructed across the room between the slits or interstices in which the folds or loops of wet fabric were allowed to fall, and in this condition to hang to be dried, the successive folds or loops of cloth being kept up, and at the same time kept separate, by the staves. The machinery and apparatus of the patent were so arranged as to travel over this open floor of staves, and in moving along to unwind a quantity of fabric, and allow it to descend between two staves, the quantity so unwound forming a loop or fold of a considerable length, depending on the height of the drying-houses; and in this manner the machine proceeded to unwind at proper intervals the requisite lengths of damp fabric, so as to hang the same on the series of staves in a series of loops or folds; and then the machine was described

as being capable of taking up the fabric, after it was dry, by simply reversing the direction of its action.

Counsel further stated that the patentee, after a succession of misfortunes, became bankrupt, and his machinery was sold in detached lots by auction, and various persons bought the parts of the machinery. The defendants became occupiers of the premises previously used by the patentee, and also purchased at the sale some of the machinery, such as the frames, cylinders, etc., which they put together, adding parts where requisite, and thus produced and worked with machinery, according to the patent, without any license from the patentee or his assignees. In thus putting up and using machinery, the defendants made various detail alterations, such as, 1. Using a flap in place of the roller, to retain the fabric of one fold or loop from descending too low, by its own weight, till it was counter-balanced by another fold of equal length and weight. 2. Giving motion to the cylinder which contained the fabric by a screw in place of a cog-wheel; this unquestionably was an improvement, when working the machine by hand, as it retained the cylinder from turning, by the weight of fabric, unless the screw itself was put in motion. 3. The giving motion, by hand, to the machine, in place of by power. 4. The stopping and adjusting the machinery by hand, in place of by power. 5. Applying the driving power to a different axis. 6. The using of a bag of shot as a weight in place of the means described. These, it was contended, were simply alterations in the details; the principle of the machinery, whereby successive quantities were deposited on the successive staves by machinery, in place of hand-labor, remained the same.

Many witnesses were called by the plaintiff to show the novelty and utility of the invention, and that the specification was sufficient to enable a workman to carry out the invention; some of them stating that the machinery, under some circumstances, was not useful for taking up the fabrics after they were dried, but that the machinery was highly useful for hanging out to dry, and also in many cases for taking up the fabrics after they were dried.

Scarlett, for the defendants, contended that the circumstances of the defendants having purchased the patented machinery, was of itself an answer to the case. The machinery was put up by the patentee, he failed, and his machinery was sold. Any person purchasing such machinery was entitled to use the invention [ALDERSON, J., intimated that that consequence did not follow, unless such was the understanding at the sale. The right of using the invention must be by license.] *Scarlett* continued, urging that the invention had failed to produce the two results described in the specification. The invention, as described, was incomplete in various details. The roller, for retaining the fabric on the rails when one fold had been dropped down, was insufficient whenever the rails or staves warped or were untrue. The patent could not be worked by the public, to any useful extent, in the form specified. The machinery only became valuable by the alterations made by the defendants, and it would be an obstruction to the progress of genius if this patent were to be supported.

Several witnesses were called, who explained the objections to the machinery before it was improved by the various alterations; and they entered into particulars of the failure, under many circumstances, of the machinery to take up fabrics after they were dried. Other witnesses spoke of other machines used in Scotland and also in England, which had some similarities to the patented machinery. In cross-examining the plaintiff's witnesses, and in examining the defendants' witnesses, it was attempted to be proved that similar machines had been used in Scotland before the date of the patent.

The judge stated that the use of the machinery in Scotland before the patent could not invalidate the English patent. (But see the later decision by the House of Lords in *Brown v. Annandale*, February 25, 1842.)

ALDERSON, J., summed up the case to the jury, in doing which he read over much of the evidence, and concluded as follows: Gentlemen, I do not think I can assist you further. You must be satisfied that the invention of the

present patentee is new, that is, was not practised by any other person in England before this patent. You will then find your verdict for the plaintiff. You will consider whether the combination of machinery, as specified, is useful. For this purpose consider, upon the whole, whether, previous to the existence of this patent, the public had as great a benefit as they had after this patent was taken out. You will take into consideration the imperfections which have been pointed out; but if you think it was still a useful invention, you will find for the plaintiff. You will also consider whether the plaintiff has properly specified all the invention, and whether the public could make the machine from this specification; if so, you will say that this is a good specification. And then take into your consideration whether the defendants, by the machines produced, have infringed this patent; if you find that they have, you will find your verdict for the plaintiff.

The Foreman. Suppose we find it was not useful in a proper way for taking up.

ALDERSON, J. I should be glad to have the fact found, and if you find specially, I shall thank you to tell me. My purpose is to have it found generally, and I will reserve the point.

Stephen. With respect to whether the staves or racks are claimed as part of the patent, and which we have called No. 1, I think it is a question of law.

ALDERSON, J. So I think; but we had better not discuss it now.

The jury, having consulted for a short time, returned a verdict for the plaintiff, *the Foreman* stating, We find that it is a new combination and a useful invention, but not adapted to take up, not useful for taking up in some cases.

ALDERSON, J. Then I should recommend you to find a verdict for the plaintiff.

The Foreman. Yes, my lord, we do; but we do not think it useful for taking up, in some cases.

ALDERSON, J. Then you find it to be new and useful,—upon the whole, sufficient for a mechanic to make by, and

be allowed), to go over the manufactory of the defendants situate at Walsal, in the county of Stafford, and to inspect the machinery set up there for making iron pipes or tubes for gas or other purposes, and to observe the method or methods of manufacturing such pipes or tubes by the defendants ; for which purpose the said defendants were to put their machinery at work in the presence of the said viewers, and to afford every facility to them to ascertain the process of welding tubes by means of such machinery, and every part thereof ; it being the object and intention of this court to enable the said plaintiff to give such evidence to the court and jury on the trial of the aforesaid action at common law as will enable him to make out (if the fact be so) the infringement complained of by his bill in this court. And that the said plaintiff should in like manner permit and suffer the solicitors of the said defendants, together with Messrs. Bramah and Clegg, and such other persons as aforesaid, in their company, to go over the manufactory of said plaintiff, situate at Wednesbury, in the county of Stafford, and inspect the machinery set up there for manufacturing iron pipes or tubes for gas, and other purposes, and to observe the method or methods of manufacturing such pipes or tubes by the said plaintiff, for which purpose the said plaintiff was to put his machinery to work in the presence of the said viewers, and to afford every facility to them to ascertain the process of welding tubes used by him, according to the terms of the specification of the letters patent in the plaintiff's bill particularly mentioned. it being the object and intention of this court to enable the said defendants to give such evidence to the court and jury on the trial of the aforesaid action at law as will enable them to prove (if the fact be so) the negative of the infringement complained of by the said plaintiff's bill. And that the plaintiff's and defendant's solicitors should respectively give notice to each other of the day and hour on which the viewers should respectively appoint to visit and view the respective works, the day to be named in such notices respectively, being at the distance of one week from the delivery of such notices respectively, and the hours of

inspection to be from ten in the morning until afternoon, if the said viewers should require long upon the premises, and the said viewers should be at liberty to carry away with them of the pipes or tubes operated upon by the presence as they might think proper, in order to produce in court on the trial of the said action.

It was further ordered that J. H., the supervisor of the plaintiff's works, and C. W. (the patentee) should attend Messrs. M. I. B. and B. D. in their manufactory of the defendants, for the purpose of the above order, but they were not to be witnesses on the trial at law as to any matter which should come to their knowledge by inspection.

A further application was made to the Lord Chancellor in this case, July 27, 1883, owing to a dispute as to the content of the order. The plaintiff considered it necessary to his case that the engineers apply to examine the working of the defendants' machinery, accompanied by competent workmen; but the defendants refused to admit more than the engineers named.

Sugden, on behalf of the plaintiff, applied for an order so worded that proper practical assistance should accompany the examiners.

Lord BROUGHAM, L. C., observed that the plaintiff ought to have every facility, and thought that the order should include such assistance as might be required.

The *Attorney-General*, for the defendant, would not oppose the application, and it was ordered that the examining engineers should be accompanied by assistants.

Order accordingly.

A similar order was subsequently made (1884) in the case of *Russell v. Ledsam*, in which the validity of the plaintiff's patent was litigated.

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Effect of, in bankruptcy on

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In bankruptcy, of shares in
the assignor, 1, that
ful authority to assi

2, that he had not by any means directly or indirectly forfeited any right or authority he ever had, etc., over the same.

Held, that the generality of the former words of the covenant was not restrained by the latter. *Hesse v. Stevenson*, 121.

Limitation of persons who may be assignees in bankruptcy of patentee, to five, confined to assignments by acts of the patentee and does not apply to an assignment by operation of law, as under a commission of bankruptcy. *Bloxam v. Elsee*, 376.

Of patents. Construction as to transfer of title. Facts considered and held that the legal interest in certain patents excepted and assigned to third party are vested in third party upon determination of the suit, without assignment. *Cartwright v. Amatt*, 110.

BILL OF DISCOVERY.

See Discovery.

BOND.

No action can be maintained on a bond given to a person in consideration of his doing something contrary to terms of letters patent; and he is equally incapable of recovering whether he knew or did not know the terms of the letters patent. *Duvergier v. Fellowes*, 477.

Proviso in patent that bond should be void if assigned to more than five persons; *held*, that the obligee must be presumed to know of that proviso; and as the bond was subject to a condition for the performance of an illegal act, it was void. *Duvergier v. Fellowes*, 446.

The illegality of the condition of the bond may be shown by the plaintiff in stating the bond itself with the condition, in his declaration; or if he omit to state the condition, it may be shown by the defendant in his plea, and the court will equally take notice of the illegality in either case. *Duvergier v. Fellowes*, 477.

To form a company of more than five persons to work a patent illegal. *Duvergier v. Fellowes*, 398.

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See also *Brunton v. White*, 386.

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COMBINATION.

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To entitle plaintiff in an action for, to recover, he must show that he is entitled to an exclusive privilege and that he, the plaintiff, is entitled to the conditions upon which the patent is granted. v. Moore, 231.

DEFINITIONS.

Application of word "invention" in specification. 317.

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Meaning of "machine," "apparatus," etc., as used in patent.

"Tapering" held not to describe a brush, the peculiarity of which is that the bristles are of unequal length. *Rex v. Metcalf*, 297.

DESCRIPTION.

See Invention.

DISCOVERY.

Bill of. Patentees filed a bill against infringers seeking a discovery; but the bill failed to embrace entire matter in controversy. The time within which the bill could be amended had elapsed. The action at law was not one which could be delayed. *Held*, that under these circumstances an application for leave to file a bill of discovery should be granted. *Few v. Guppy*, 329.

If any material part of the alleged discovery fail, the patent is void. *Hill v. Thompson*, 304.

Knowledge of an invention must be communicated, or made use of, in order to complete a discovery. *Hill v. Thompson*, 304.

DRAWINGS.

See Specification.

ENGLAND AND SCOTLAND.

See Priority.

ENROLMENT.

Of patent. Cannot be dispensed with for the purpose of preventing the specification being made public. *Ex parte Hoops*, 113.

Of specification. Clerical error in, is amendable. *Re Redmund*, 397.

Of specification. *Held* in time, when enrolled on June 10, patent being dated May 10, as month did not begin to run until the day after the date of the patent. *Watson v. Pears*, 179.

Time for, cannot be enlarged after a patent has passed without an act of Parliament. *Ex parte Hoops*, 113.

EQUITY.

See Possession.

Cannot decree specific performance of an agreement not to reveal the composition of a medicine, nor enjoin the promisor in such an agreement from revealing the secret. *Newbery v. James*, 282.

Has power to make its order directing an action to be brought effective by granting an order that plaintiff's witnesses shall have an opportunity of inspecting defendant's premises and machinery. *Bovill v. Moore*, 224.

EQUIVALENTS.

Doctrine of. *Webster v. Uther*, 369.

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See Covenant not to use; Fraud.

EVIDENCE.

Of ownership of patent. *Bloxam v. Elsee*, 373.

Of want of novelty. *Rex v. Hadden*, 386.

Testimony of expert that he had never before seen a similar construction, *held prima facie* sufficient evidence of novelty. *Manton v. Manton*, 189.

Testimony of one witness that he had previously seen and practised the application of the principle involved, *held* to overbalance the statement of fifty that they had no knowledge of it. *Manton v. Manton*, 189.

Where evidence as to title is not conclusive, injunction is dissolved and an issue directed, defendants being ordered to keep an account. *Sheriff v. Coates*, 429.

EXCLUSIVE PRIVILEGE.

See Damages ; Possession.

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A patent giving, in general terms, an exclusive privilege, it must be for some particular machine or method. *Brown v. Moore*, 220.

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Royal grant of, to manufacture within realm or, without limitation, to import and sell, void even prior to Statute of Monopolies. *Darcy v. Allein*, 1.

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New facts which would be grounds for annulling a patent will not be received on a motion for a new trial of an action for infringement. *Lewis v. Marling*, 421.

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Plaintiff communicated nature of invention which he had made, to defendant, under agreement by latter to take no undue advantage of same. Defendant took out patent for invention in his own name. *Held*, plaintiff entitled to damages. *Smith v. Dickenson*, 157.

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For plaintiff in an action for damages for infringement implies that the claim and description are sufficient. *Hornblower v. Boulton*, 98.

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Of patent for addition may be made. *Morris v. Bramson*, 21.

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In specification. Any material alteration must be stated. *Rex v. Arkwright*, 29.

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Patent for, does not restrict use of machine in its original form. *Beaumont v. George*, 206.

Patent for, may be valid, but it does not restrain from using machine in original form. *Harmer v. Plane*, 166.

Patent for, must be limited to improvement. If it comprises entire machine, it is void. *Bovill v. Moore*, 268.

Specification of, *held* bad as embracing former construction as well as improvements. *Macfarlane v. Price*, 227.

Trivial improvement patentable. *Webster v. Uther*, 369.

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Effect of verdict for plaintiff in suit for. *Hill v. Thompson*, 304.

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- To restrain infringement of patent. On application for, party must swear that, at the time of making the application, he believes that at the date of the patent the invention was new, or had not been previously known or used in this kingdom. *Sturz v. De La Rue*, 399.

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- If such possession cannot be proved, the court will not grant such protection, but will send the parties to a court of law to decide the question of validity. *Beeston v. Ford*, 427.
- Of an invention by a patentee under a patent is counted in favor of an assignee in determining whether the latter has had exclusive, undisturbed possession long enough to be allowed an injunction without an adjudication of a legal title. *Beeston v. Ford*, 427.
- Where a patentee has for a number of years enjoyed exclusive possession under a patent, equity will not allow that possession to be disturbed, but will grant an injunction until a trial at law, whatever doubt there may be as to the validity of the patent. *Beeston v. Ford*, 427.

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- Motion for leave to enter a verdict for plaintiff in an action for infringement, instead of a nonsuit. *Sanders v. Aston*, 466.
- Motion for nonsuit on case reserved. *Bloxam v. Elsee*, 376.
- Motions, after verdict for plaintiff, by defendant for leave to enter nonsuit; and by plaintiff for an increase of the verdict. *Smith v. Dickenson*, 157.
- Motions by plaintiff to commit defendant for contempt in violating an injunction against infringement, and by defendant to dissolve the injunction. *Walker v. Congreve*, 274.
- Motion to amend bill for an injunction to restrain violation of copyright. *Dilly v. Doig*, 58.
- Motion to dissolve an injunction against infringement. *Hill v. Thompson*, 285.
- Motion to dissolve injunction. *Boulton v. Bull*, 97; *Beaumont v. George*, 206; *Sturz v. De La Rue*, 399; *Sheriff v. Coates*, 429.
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- Motion to revive an injunction. *Hill v. Thompson*, 299; *Beeston v. Ford*, 427.
- Motion to set aside a nonsuit. *Crompton v. Ibbotson*, 395.
- Motion to set aside verdict and grant new trial. *Turner v. Winter*, 43.
- Petition to amend enrolment of specification. *Re Redmund*, 397; *Re Whitehouse's Patent*, 429.
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- Scire facias to repeal a patent. *Rex v. Arkwright*, 29; *Rex v. Elsee*, 40; *Rex v. Cutler*, 225; *Rex v. Metcalf*, 297; *Rex v. Hadden*, 386; *King v. Fussell*; *King v. Daniell*, 392.
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A drawing or figure which will enable workmen of ordinary skill to construct the improvement patented is as good as a written description. *Brunton v. Hawkes*, 327.

And letters patent are to be taken as one instrument. *Crossley v. Beverley*, 438.

Ambiguity in, renders patent void. *Campion v. Benyon*, 345.

Ambiguity intentionally introduced into specification or a direction therein tending to mislead avoids the patent. *Turner v. Winter*, 43.

Attempt in, to cover more than is actually new and useful vitiates the patent, rendering it ineffectual even to the extent to which it might otherwise have been supported. *Hill v. Thompson*, 299.

Breadth of description. *Bainbridge v. Wigley*, 181.

Breadth of. Description of improvement. *Cochrane v. Smet-hurst*, 228.

Claiming as part, but not as an essential part, of the invention something which proved useless. Patent not avoided by. *Lewis v. Marling*, 417.

Construction of a phrase in. *Cochrane v. Braithwaite*, 451.

Containing full description of whole machine improved, but not distinguishing new improved parts from old parts or referring to former specification otherwise than as the second patent recited the first, *held* a performance of the condition that unless specification particularly describing, etc., was enrolled within one month after application, patent should be void. *Harmar v. Playne*, 171.

Description of improvement. Specification *held* bad as embracing former construction as well as improvements. *Macfarlane v. Price*, 227.

Designation of materials held insufficient. *Crompton v. Ibbotson*, 395.

Enrolment. Clerical error in, amendable. *Re Redmund*, 397 ; *Re Whitehouse's Patent*, 428.

Enrolment. Time allowed for. *Watson v. Pears*, 179.

Enumeration of ingredients or processes which will not answer the purpose claimed, or of substances not necessary to the production of the patented article, avoids the patent. *Turner v. Winter*, 43.

Explaining a doubtful specification by testimony is not allowable. *Brooks v. Ripley*, 465.

Fact that part of invention, described but not claimed, as essential, turns out to be not needed, does not vitiate the patent in the absence of fraud. *Lewis v. Marling*, 421.

- For more than actual discovery. Patent held void. *Campion v. Benyon*, 345.
- General interpretation of. The terms of a specification must be interpreted according to the state of knowledge at the time they were used, and not to be taken to embrace subsequent discoveries. *Crossley v. Beverley*, 409.
- Held* insufficient as not properly connecting in its terms the materials used with the process described. *Felton v. Greaves*, 416.
- If, prior to time of granting, a patent is communicated to the public in the shape of a specification of another patent, or otherwise becomes known to the public, the patent subsequently granted is avoided. *Huddart v. Grimshaw*, 128.
- If specification exceeds limits of actual invention, patent is void. *Bovill v. Moore*, 231.
- If the invention be an improvement, it must distinctly appear on the face of the specification to be claimed as such. *Hill v. Thompson*, 304.
- Insertion in, of unnecessary matters, or of anything as important which is not so, will vitiate. *Huddart v. Grimshaw*, 128.
- Intermediate improvements. The insertion of improvements devised in the interval between granting the letters and filing the specification is proper and does not avoid the patent. *Crossley v. Beverley*, 438.
- Limitation of claim in. *Manton v. Manton*, 189.
- Must accurately describe invention. *Hill v. Thompson*, 299.
- Must accurately describe nature of invention and set forth claims of patentee in minute detail. *Campion v. Benyon*, 345.
- Must be so clearly expressed that persons acquainted with the manufacture may say there is no difficulty in determining how the invention should be contrived without experimenting upon it. *King v. Fussell*, 338.
- Must clearly describe nature of invention and the manner of its use. *Brunton v. Hawkes*, 336.
- Must cover and support patent. *Campion v. Benyon*, 345.
- Must separate that which is new from that which is old. *Manton v. Manton*, 189.
- New specification to be taken as substitute for former specification. *Bloxam v. Elsee*, 373.
- Omission from, may avoid patent notwithstanding it was not made with fraudulent intent but only inadvertently; otherwise if the matter omitted was a subsequent discovery. *Bovill v. Moore*, 231.
- Omission from, avoids patent. *Wood v. Zimmer*, 202.
- Omission, in specification of an improved gas apparatus, of direction for condenser—a necessary part of every gas apparatus—held not to invalidate. *Crossley v. Beverley*, 409.
- Requisites and sufficiency of. Specification must be such, in case of a machine, that mechanics may be able to make the

- machine by following directions, without any new inventions or additions of their own, and without information from other sources. In case of an improvement, any material alteration must be stated. *Rex v. Arkwright*, 29.
- Requisites and sufficiency of. Specification must fully disclose the invention, and contain nothing materially false or defective. *Rex v. Arkwright*, 29.
- Requisites and sufficiency of. The insertion of more things than are requisites constitutes a fatal defect. *Rex v. Arkwright*, 29.
- Requisites of. Inventor not restricted to description by words only, but allowed to annex drawings. *Bloxam v. Elsee*, 373.
- Requisites of. Patent for combination of substances should name the substances. If it only describes modes of making them, instead of giving their familiar names, it is bad. *Savory v. Price*, 366.
- Requisites of. See head note *Bovill v. Moore*, 231.
- Slight departure from, made for purpose of evading same, constitutes an infringement. *Hill v. Thompson*, 304.
- Specification considered and *held* not void because another patent had been before granted to other persons for effecting the same object. *Hullett v. Hague*, 453.
- Sufficiency of. *Liardet v. Johnson*, 23; *Boulton v. Bull*, 59; *Hornblower v. Boulton*, 98; *Huddart v. Grimshaw*, 128; *Harnar v. Playne*, 171; *Sturz v. De La Rue*, 399.
- Sufficiency of. If specification is understood by those whose business leads them to be conversant with such subjects, it is intelligible. *Arkwright v. Nightingale*, 24.
- Sufficiency of. In suit for infringement, the plaintiff must give some evidence of the sufficiency of the specification unless this is admitted. *Turner v. Winter*, 43.
- Sufficiency of. Misapplication of meaning of word. *Rex v. Metcalf*, 297.
- Sufficiency of. Patent held void because specification was not sufficiently precise and because patent appeared to be for a different thing from that mentioned in specification. *King v. Wheeler*, 317.
- Sufficiency of. Specification must specify the materials of which the invention is to be composed so distinctly as will deter persons from using materials experimentally which will not answer the purpose. *Crompton v. Ibbotson*, 394.
- Test of sufficiency, is whether it explains the invention to artisans skilled in the subject. *Huddart v. Grimshaw*, 128.
- Test of sufficiency: Will it enable a competent workman to make the machine? *Bovill v. Moore*, 231.
- Validity of. Effect of former verdict. Acquiescence in former verdict adverse to patent raises a presumption against it. *Rex v. Arkwright*, 29.
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- 9 Edw. III., c. 1 and 2, pp. 4 ; 7.
 2 Hen. V., c. 5, p. 7.
 33 Hen. VIII., p. 7.
 15 Geo. III., c. 61, pp. 65 ; 67 ; 68.
 41 Geo. III., p. 121.
 27 Hen. VIII., c. 16, p. 180.
 53 Geo. III., c. 179, p. 272.
 6 Geo. I., c. 18, pp. 378 ; 380 ; 382.
 34 Geo. III., c. 23, p. 429.
 27 Geo. III., c. 38, § 1, p. 436.

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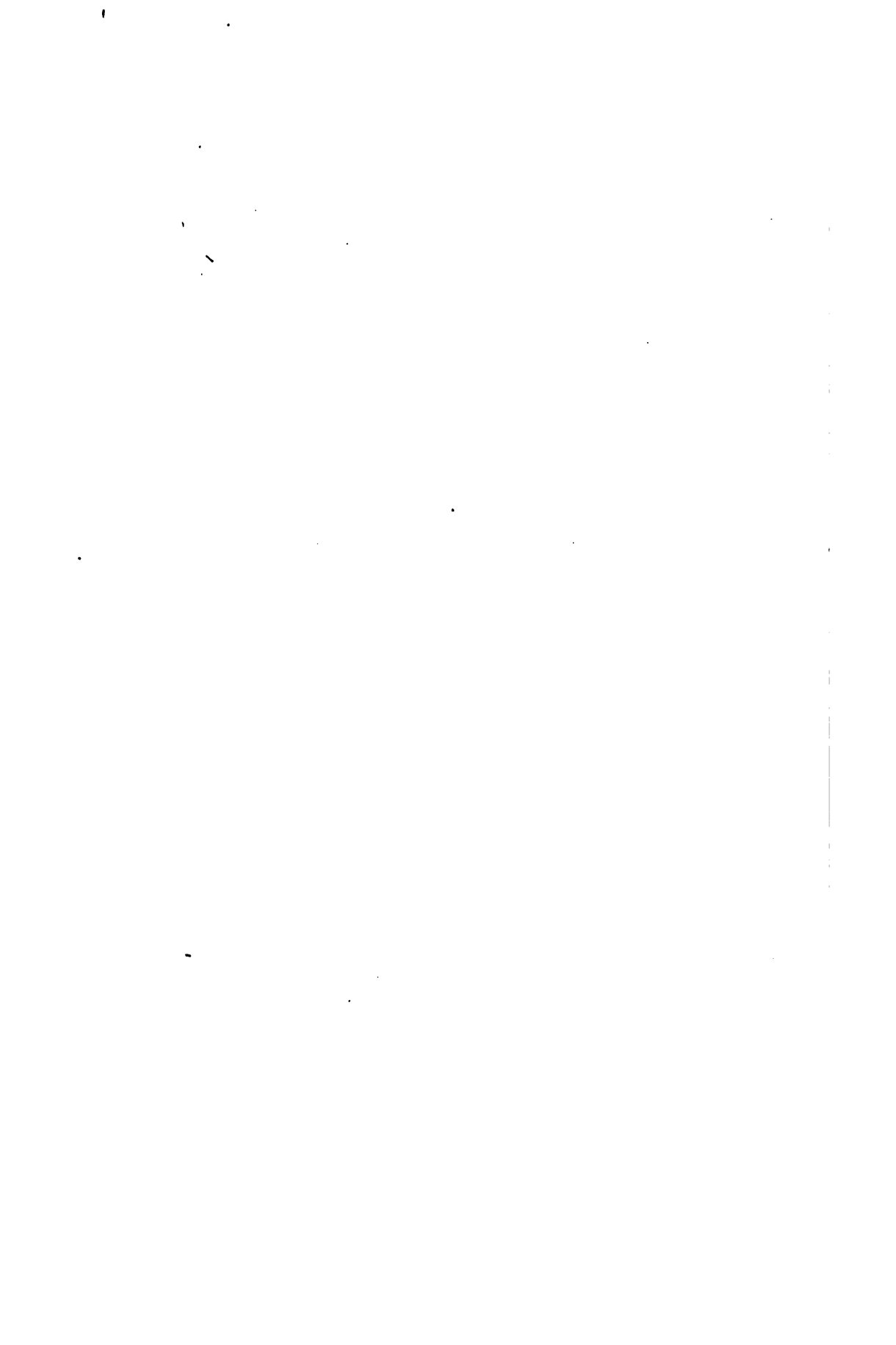
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